

Highlights®

THE MONTHLY BOOK
for Children

June
July
1973

INCLUDING

Children's
Activities®

fun
with a
purpose

Hello!



Highlights

for Children

Volume 28
Number 6
June-July 1973

This book of wholesome fun is dedicated to helping children grow in basic skills and knowledge in creativeness in ability to think and reason in sensitivity to others in high ideals and worthy ways of living—for CHILDREN are the world's most important people

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Patriotism



Freedom Foundation

For Outstanding Achievement in Bringing About a Better Understanding of the American Way of Life

Our Country

By Harry Behn

Come, let us learn to be
Worthy of liberty,
Come, let us praise
All that our fathers knew,
All that is brave and true,
All that we hope to do
All of our days!

One nation, strong we stand
In truth across the land!
Come, let us sing
Humbly, but still with pride,
As firmly and far and wide
From every mountainside
Let freedom ring!

From *The Golden Hive*, copyright, 1962, 1966 by Harry Behn. Reprinted by permission of Harcourt Brace Jovanovich, Inc.



Photograph courtesy of Wide World Photos, Inc.

Find the Pictures

Can you find each of these small pictures at another place in this book?



This chart is to guide parents and teachers in selecting features from this issue which will prove most helpful to each particular child.

A Guide for Parents and Teachers

What Is Emphasized

Page	Preparation for Reading	Easy Reading	More Advanced Reading	Manners, Conduct, Living With Others	Smiles and Laughter	Moral and Spiritual Values	Poetry, Music, and Other Arts	Nature and Science	Our Country, Other Lands and Peoples	Stimulation To Think and Reason	Stimulation To Create
3 Find the Pictures	✓	✓					✓		✓	✓	
5 Editorial			✓	✓			✓				
6 Victory for Jeff			✓								
8 For Wee Folks	✓	✓								✓	
10 Hidden Pictures	✓	✓							✓		
12 Brain Busters			✓					✓	✓		
13 The Bear Family	✓	✓		✓							
14 A Special Day		✓			✓						
16 The Timbertoes	✓	✓		✓							
17 Sammy Spivens			✓								
18 Fun With Phonics	✓	✓	✓						✓		
19 Scissorettes		✓								✓	
20 Lyndon B. Johnson			✓						✓		
22 Science Questions			✓				✓				
23 Jonathan's House	✓			✓							
24 Will Earns His Mark			✓						✓		
26 Tunisia			✓						✓		
28 Things Grow Big	✓			✓							
30 Fungus Destroys Elm			✓				✓				
32 Our Own Page	✓	✓								✓	
33 Why My Dad Is Special	✓	✓								✓	
35 Goofus and Gallant	✓	✓		✓		✓					
36 Symphony Orchestra			✓				✓				
38 First Woman in Space			✓						✓		
40 Science Reporting			✓				✓				
42 Rutabaga Summer			✓		✓						
44 Fun With Words	✓								✓		
45 Using Your Mind			✓						✓		
46 The Story of Bread			✓							✓	
48 Some Things To Make		✓	✓							✓	
50 Headwork	✓	✓	✓						✓		

★ This star seen at the bottom of many pages indicates a footnote to parents and teachers.

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Let's Talk Things Over

Lots of people do kind things for us and our friends. They don't get paid for doing these things. They do them because they want to do them, just as you help your mother and do many kind things for her without expecting to be paid. Imagine having to be paid every time you put away your playthings or make your own bed.

Suppose someone had paid your mother every time she changed your diapers when you were a baby, every time she fed you or gave you a bath. Suppose she had to be paid for everything she does for you now, whether you are five, eight, or twelve. She does all these kind things for you and you do all the kind things for her because she is your mother and you are her child, and you love each other.

Your mother also does many kind things for other persons without pay. Maybe she is a Cub Scout Den Mother. Maybe she leads a group of Brownies, Girl Scouts, or Campfire Girls. Maybe she teaches a religious class or sings in the choir or serves on a committee at the P.T.A. She doesn't get paid for doing these things. Other kind women do ever so many things like these.

How could we have Sunday school or church choirs or Scouts or Cubs or Brownies without such kind persons? It would be fun to stop right here and name some of these kind women and tell what they do for you, your playmates, and other children.

A Wish

I wish that I could always be

So thoughtful of others

That I just naturally

Would have good manners,

And needed none to tell me how

Next year, tomorrow, or right now.

—G.C.M.



Your dad also may do many kind things like these for other persons without getting paid for doing so. He may be a Scout Master or a Den Dad, or he may serve on a church committee or board. He may serve on the hospital board, school board, or Red Cross committee. You may be able to name other things like these he does without pay. You may know a playmate's father or uncle or a neighbor who also does many such kind things.

If you live in a small town, your father or big brother or neighbor may be a member of the volunteer fire company. When he hears the fire siren, he rushes to help put out the fire. He does this because he wants to do it. He is not paid. What would you and I do if kind men did not serve on the volunteer fire company?

Your father and mother may both give a lot of time to serving others in ever so many ways. Sometimes you wish they were not doing quite so much so you could have them home with you more of the time. But then you remember how much good they are doing for others. You are sure that when you are grown up you also are going to get pleasure from doing as much good for others.

It does us good to think about all these kind men and women who do so much for us because they want to make our neighborhood a good and safe and happy place to live in. Perhaps as you get older, you will be able to do more and more kind things for others.

Garry C. Myers

Victory for Jeff

By Miriam Graham

The starting whistle shrilled. From between the red buoys, fourteen small rowboats splashed forward. The Junior Dinghy Race was on.

Jeff had a wild moment when his boat, "River Rat," fouled in a piece of underwater drift. He freed it with his right oar and was off a minute behind the others. For a twelve-year-old he had a good stroke. The long hours of practice were showing.

"Pull, two, three . . . pull, two, three," chanted Jeff. The eleven-foot "River Rat," its white paint gleaming in the sun, spurred ahead. He passed the next three dinghies.

The water frothed as oars flashed and dipped into the green river. Like a family of ladybugs scattering toward home, the racers in their orange life jackets rocketed upstream toward the white finish buoy one mile ahead.

Steadily Jeff gained on the leaders. Soon there were only two boats to pass. In another five minutes there was one. Only Ed Winters was ahead.

"Don't count on it, Ed," Jeff muttered. "I'm coming."

Ed Winters had edged him out

the last two years, coming in first for the trophy. Everyone who knew Ed had heard about it many times. This year Jeff had spared no effort to build muscle and staying power, for this would be his last race. The age limit was twelve.

Jeff pulled the "River Rat" toward the edge of the channel as he neared the inside curve of the river where the current was weakest. Here he could make better time. Today, though, a green runabout was in the way, crisscrossing as it explored the river. In it were a father, mother, and five children. Jeff worried when he saw how crowded the boat was.

Something else—no one, not even the smallest child, wore a life jacket!

Jeff had thought everyone knew that all small children should wear life jackets on the water. His father, a coastguardsman, had taught him that adults, also, who did not swim well should wear jackets. He said regulations required a life jacket aboard for everyone in a boat.

Before Jeff could signal to the safety patrol boat running alongside the racers, the green runabout turned upstream and droned out of sight.

Jeff had lost time. He thought he heard oars splashing close behind. He dug his heels into the floorboards and pulled until his arms ached, driving toward the red victory flag waving from the tip of the white finish buoy. The splashing of the oars behind died away.

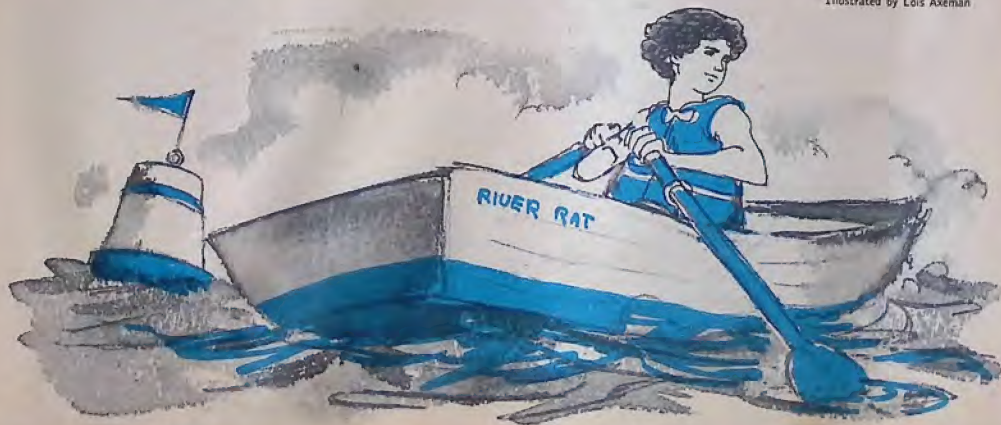
Stroke by stroke, grunt by grunt, Jeff gained on Ed Winters. Ed began to get nervous. Too many times he peeked over his shoulder. That slowed him down.

Jeff dug up an extra spurt of steam. He broke across Ed's wake, pulled alongside, and went by without looking at him. All he wanted to see was that red flag waving from the tip of the white finish buoy around the next bend.

He was fifteen feet in the lead and proud of himself as he rounded that last bend. What he saw there made him forget himself, Ed Winters, and the entire Junior Dinghy Race.

Fifty feet away the runabout, power lost, drifted as helpless as a leaf in an eddy. There was danger ahead. The man at the wheel of the green boat saw that he was in the path of a large wave which had been ploughed up by a passing cruiser.

Illustrated by Lois Axeman



He did his best to get his engine started so that he could head safely into the wave.

"Oh, no," groaned Jeff. The motor would not start.

To his alarmed eyes, the wave was traveling with the speed of an express train. He looked around and saw Ed Winters passing, going upstream. He screamed at him.

"Ed, boat in danger. Stand by."

Ed Winters did not look at him. He rowed steadily on toward the red victory flag.

It was scary how fast the wave approached. It caught the overloaded boat on the side, carrying it high into the air. The frightened passengers crowded to the other side. The boat, now off balance, keeled over. Instantly, the whole family was in the water.

"Help!" cried the father. He caught the two youngest children in his arms and kicked to keep their heads above water.

"Help!" cried the mother, struggling to reach the other children.

"I'm coming," called Jeff. His oars flashed like propellers. "Keep kicking," he shouted. He saw the runabout's bottom surfacing as two of the older boys started to swim for shore. "Stay with the

boat," he called. "It's coming up." At his call they turned back, heading for a handhold on the overturned runabout.

Jeff quartered his dinghy into the big wave when it hit, riding it easily. Soon he was at the scene, lifting the dripping toddlers into the "River Rat" and placing them low in his boat. When the others had been helped to firm handholds on the boats, Jeff reached under his seat for his horn and blew until his lips were numb.

Brrr...oooo...ow — ow — OOOO! "Kutt...kutt...kut," came an answer. It was the safety patrol boat. How good the chatter of its motor sounded to Jeff! It glided in with cut engines, closely followed by several small cruisers. Willing hands went to work, lifting the exhausted family aboard.

The safety patrol officer laid an arm over Jeff's shoulders. "Good boy, Jeff. We'll take over from here. Sorry about your race."

Jeff looked at him in surprise. He had forgotten the race. The red victory flag at the top of the white buoy had lost itself under the water together with the runabout. He sponged out the "River Rat" and headed for home.

Ed was back at the moorage showing his silver trophy when Jeff arrived. The miniature dinghy gleamed in the sun.

"Congratulations," said Jeff sincerely. "You have a good stroke."

"Same to you," said Ed. "I heard about the accident. They said you called, but I didn't hear you. Concentrating too hard, I guess. I thought you were still ahead."

Jeff believed him. Ed wasn't acting his usual triumphant self. He looked at Jeff in a way that was hard to understand. Anyone who didn't know Ed might think that he looked as if he thought Jeff was the one to come in first.

Ed wrapped his trophy in a piece of newspaper and put it in the corner of his bicycle basket. He hung one leg over the bar and stood for a moment digging in his pocket. When he found what he wanted, wadded and tightly rolled, he put it in Jeff's hand.

"Here," he said. "Here is something that belongs to you."

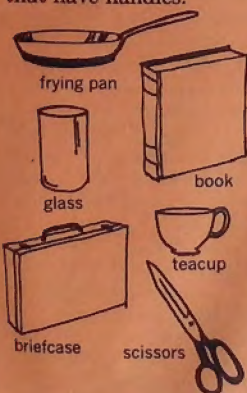
Jeff watched him pedal out of sight before he shook out the wad of cloth Ed had handed him. It was a red victory flag, streaked with a bit of white paint from the top of the finish buoy.

For Wee Folks

Point to the boy carrying the flag. The girl beating the drum.
The girl playing the flute. The boy with the three-cornered hat.



Which have handles?
Which do not?
Name some other things
that have handles.



Which of these things
can you do?

Put on your own clothes
Ride a tricycle
Answer the telephone
Brush your teeth
Cut your meat alone

Go alone to the barber
Take good care of a pet
Make your own bed
Peel an apple
Write and mail a letter
Put on your own shoes
Make a present for a friend
Put your toys away

How are these alike?
How are they different?



Answers to Brain Busters, page 12

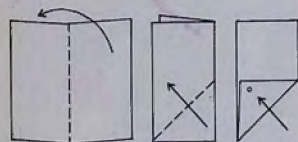
What Will Happen If?: Container B would cool off fastest. Do you know why?

Mystery Photo: The wet track was made when a bicycle was ridden through the puddle at the top. Can you tell which track was made by the front tire?

Can You Do It?: If a pencil is held between two bright lights indoors, two shadows will be formed. What happens as the pencil is moved toward one of the lights?

For Science Experts Only: The noise in ginger ale is caused by the carbon dioxide bubbles which break as they float to the surface.

Fun With Shapes: Here is how the paper was folded and punched.



1. Fold in half

2. Fold up corner

3. Punch where shown



Matching Musical Instruments

Look at each instrument at the left.
Find an instrument like it at the right.





Hidden Pictures

Little Tommy Tucker

Can you find these objects in the large picture above?

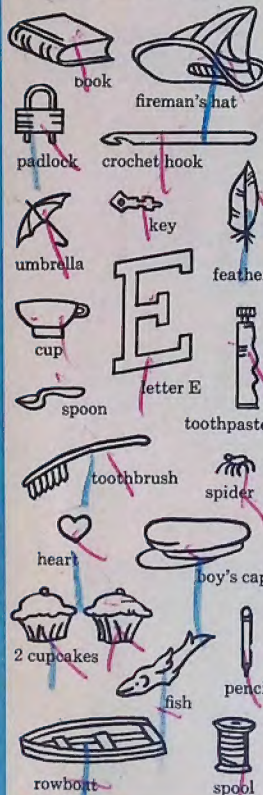
cup book spool spoon spider padlock letter E boy's cap 2 cupcakes crochet hook
key fish heart pencil rowboat feather umbrella toothbrush toothpaste fireman's hat

Little Tommy Tucker

Little Tommy Tucker
Sings for his supper.
What shall he eat?
White bread and butter.

How will he cut it
Without e'er a knife?
How can he marry
Without e'er a wife?

Can you find these objects in
the large picture at the left?



Younger or Older

Does another child seem to you
to be younger or older than he
really is—seem babyish or seem
grown-up

Who tries to show off?

Who always waits on himself when
he can?

Who often plays sick to escape do-
ing what he doesn't like to do?

Who doesn't let other children scare
him into doing what he knows he
should not do?

Who lets his playmate say what to
play next?

Who daydreams in class and doesn't
hear what is being said?

Who, when he drops a glass of milk
and breaks the glass, cleans up the
mess himself?

Who often talks at home about the
kind ways of other persons?



"Let's play ball out front."

"Wouldn't it be better to play in
the park? There are so many cars
here."

"I guess you're right."

How Alike? How Different?

How are the things in each pair alike? How are they different?



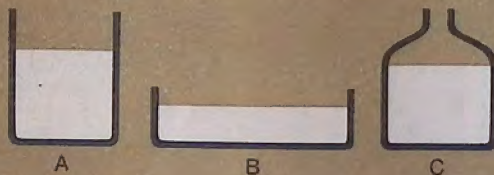
Brain Busters

By David Webster

Answers on page 9

What Will Happen If?

Suppose a cup of boiling water were put into each of these glass containers. Which one would cool off fastest?



Mystery Photo

What made this track?



Can You Do It?

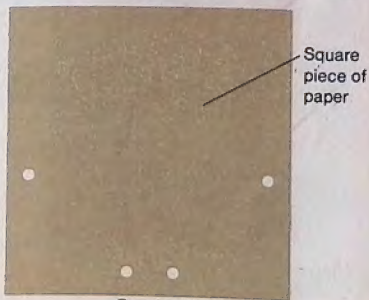
Can you hold a pencil someplace so it makes two shadows?

For Science Experts Only

Listen to a glass of ginger ale. What makes the noise?

Fun With Shapes

A square piece of paper was folded several times and then punched just once with a paper punch. Can you fold and punch a piece of paper so it looks like the drawing when unfolded?



★ Challenging problems to encourage thinking and reasoning.

The Bears Paint a Garage

By Garry Cleveland Myers

Pictures by Virginia Filson Walsh



Woozy: "By doing this ourselves we save money."

Father: "I didn't know the children could do so well."

Poozy: "And it's a lot of fun."

Piddy: "You don't know us, Pop."



Piddy: "Don't you drop paint on us."

Mother: "Piddy, we'll see who is the best painter."

Woozy: "Hurry, Poozy, or I'll beat you."

Piddy: "I wish I could be on that ladder."



Mother: "Hope it doesn't rain."

Woozy: "Wish we had used green paint."

Father: "I think we can finish."

Piddy: "Red paint would be prettier."

★ The Bears work together.



A Special Day

By Shirley Markham Jorjorian

Illustrated by William Hutchinson

14

Freddie heard the front door slam. He swallowed his orange juice, grabbed his books, and dashed out the door. "Wait for me!" he shouted to his big brother.

Bill stopped and turned. "Better hurry if you're walking with me. I have something special to do today and I have to be at school early."

"What's special about today?" asked Freddie. "It's not a holiday. It isn't Christmas or Thanksgiving or Easter."

"No," said Bill, "I know it isn't a holiday. But it's a very special day for me."

Freddie shook his head. "Well, what

is special about today? Why do you have to go early?"

"You'll see after we get to school," said Bill. "But I'll give you a clue now. It is something I've wanted to do since I was in your grade. But third-graders can't do it, only sixth-graders. This week it's my turn. You'll soon see."

Freddie couldn't imagine what his brother was going to do.

At last Bill and Freddie came to the school grounds.

"Wait here with my books," said Bill. "I'll be right back." He dashed into the building.

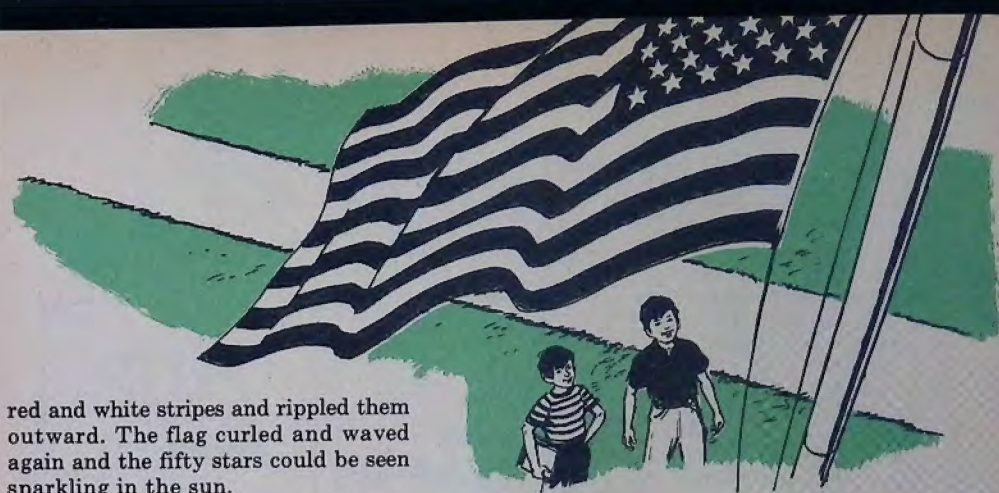
Soon Bill came out of the door. Freddie could see that he held something in his arms, but he couldn't tell from a distance what it was. "Maybe it's



something alive," he thought. "Bill is carrying it so gently."

But then Bill stopped near the flagpole.

"The flag!" gasped Freddie. "He's raising the flag." He watched his brother carefully unfold the flag, attach it to a rope, and raise it higher and higher. The morning breeze caught the



red and white stripes and rippled them outward. The flag curled and waved again and the fifty stars could be seen sparkling in the sun.

Bill stepped back from the flagpole and stood straight, beaming up at the red, white, and blue fluttering against the sky. "Boy oh boy!" he said. "At last I got to raise the flag!"

"That was great," smiled Freddie. "I'll be glad when I'm in the sixth grade. I want to raise the flag just like that."

15

Jokes

Selected by Children Seven to Twelve Years of Age

Teacher: "What did they do at the Boston Tea Party?"

Student: "I don't know. I wasn't invited."

Patti Youhn—Florida

Voice on phone: "Hello, is this the Weather Bureau?"

Weatherman: "Yes, it is."

Voice on phone: "How are chances for a shower tonight?"

Weatherman: "It's okay with me, sir. Take one if you need it."

Paula Werchowsky—Michigan

Max: "Where is yesterday's newspaper?"

Alan: "I wrapped the garbage in it and threw it out."

Max: "Aw, I wanted to see it."

Alan: "Wasn't much to look at, just some orange peels and coffee grounds."

Wanda Wells—Canada

Tom: "Did you know that a grasshopper can jump a distance that is 50 times its own length?"

Tim: "No, but I've seen a wasp lift a 250-pound man three feet off the ground."

Fernando Zago—California

A gorilla walked into a drugstore and ordered a fifty-cent sundae. He paid for it with a ten-dollar bill. The clerk, thinking gorillas know little about money, gave him one dollar for change, and said, "We don't get many gorillas here." The gorilla said, "No wonder, at nine dollars a sundae!"

Jessica Fax—Arizona

Policeman: "You were going over the speed limit."

Driver: "How fast was I going?"

Policeman: "Eighty miles an hour."

Driver: "Impossible. I've been driving only fifteen minutes."

Lisa Hamlet—Illinois

First Man: "Do you think it's a sin for me to play golf on Sunday?"

Second Man: "The way you play, it's a sin to play any day."

Doug Stephan—Indiana

Send us the funniest joke or the best riddle you ever heard, with your name, age, and home address. If we think it good enough, we might print it in HIGHLIGHTS. Mail to Highlights for Children, Honesdale, Pa. 18431.

Limericks

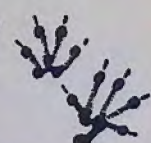
There once was a man from Nantucket
Who kept all his cash in a bucket;
But his daughter, named Nan,
Ran away with a man,
And as for the bucket, Nantucket.

A canner, exceedingly canny,
One morning remarked to his granny,
"A canner can can
Anything that he can,
But a canner can't can a can, can he?"



THE TIMBERTOES

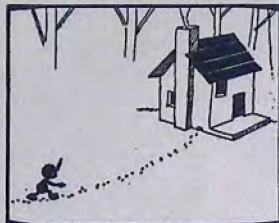
by John Gee



Tommy went for a walk. He noticed footmarks on the ground.....So he followed the footmarks.



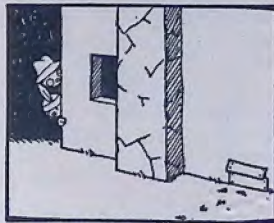
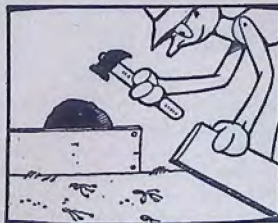
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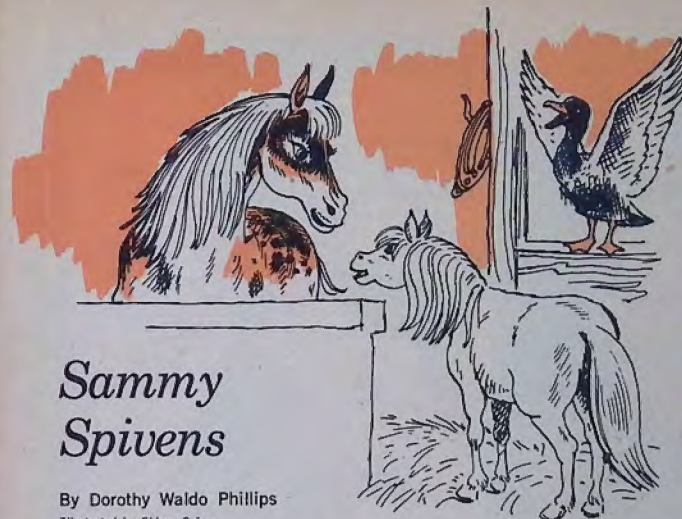
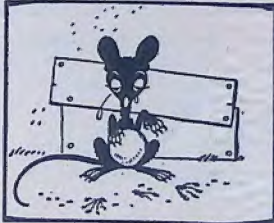
They led right back to the house. They went into a hole in the house. Look, Pa! he cried. Pa came running.



These footmarks are mouse tracks, said Pa. He covered the hole with boards. They watched from behind the house



—until the mouse returned. That is Woody Woodmouse! cried Pa. Woody Woodmouse just sat and wept.



Sammy Spivens

By Dorothy Waldo Phillips

Illustrated by Sidney Quinn

Hello there:

Sammy is always collecting something. Are you?

It's either stamps or stones or snakes, but lately—it's been germs. Sammy has collected chicken pox.

So if you hear of a pink spotty thing jumping in and out of bed—that's Sammy.

Chalky, the pony, wondered where Sammy could be. So she broke away from her stall and went out into the world to explore. Pretty soon she was trotting across the meadow and snooping into Talbot's barn.

"Why, hello, Ethel," she neighed to her old friend the plow horse.

"Nice to see you," blinked Ethel.

"Hi," cackled Gilbert, the goose.

"You girls better break it up. Here comes Farmer Talbot."

When the farmer chased after Chalky, she quickly galloped for home. But she picked the busy main street for the trip and soon she became terribly frightened. Cars and trucks tried to dodge her. Then just as she reached the Spivens home, she slipped and fell. Her leg was injured and she cried pitifully.

Sammy ran to the window. You can imagine how he felt.

Out dashed Dad. Mother found Sammy hurriedly dressing—spots and all. Gently she explained that if he would be patient he could later telephone to the horse hospital and talk to Dr. Morris.

"I'm sure he will be very kind to her and make her well again," she said.



While Chalky was in the hospital, she met another patient named Franco. He was a pleasant high-stepping pinto with a silky mane.

"Where do you come from?" asked Chalky.

"I've lived all over the world,"

said Franco. "You see, I'm in the circus business."

"You must have had many exciting adventures," said Chalky.

"Yes, but the last one landed me in the hospital," sighed Franco.

"You see, my friend and I trot around and around in the ring while Elsa, the lady bareback rider, dances daintily up on our backs. She wears a soft shimmering skirt and there are spangles in her hair. Elsa has been so kind to me and I love her dearly. She's married and has a dear little boy named David.

"Last week we were practicing our act when I noticed Remarkable Ronald in the next ring. He's the man who jumps through the hoop of flaming fire.

"Just as he ran for the jump, I saw young David clapping his hands with delight as he ran behind, expecting to do the same thing. I practically stampeded out of the ring. And with my big strong teeth I grabbed the seat of his pants and dragged him to safety. But—I got badly burned."

"How proud I am to meet a horse hero," said Chalky.

"It is most kind of you to say so, madam," said Franco modestly—and he bowed his most elegant bow.

I thought Sammy might like me to write it all down. Maybe it will help pass the chicken-poxishness time.

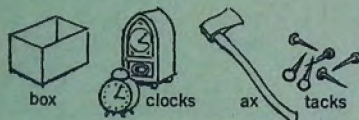
Love,
Aunt Dorothy
P. S. Three of Columbus' children have the mumps.



Fun With Phonics

When x and cks Sound Alike

Say the pictured words aloud.
Notice that x sounds like cks.



Now say the following pairs of words.

ox - socks	wax - shacks
vex - necks	fix - sticks
mix - ticks	tax - racks

We just have to remember how words like these are spelled.

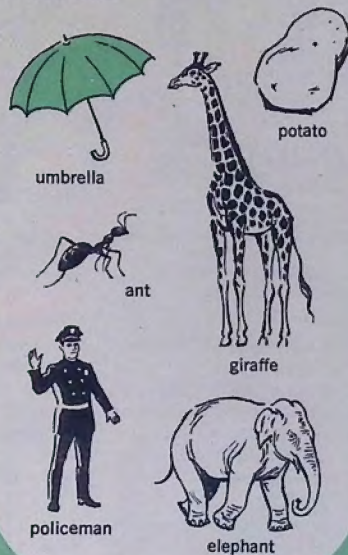
Words with m

Find two words that begin with the m sound.
Two that end with the m sound.
Two that have the m sound in the middle.



Syllables

Say aloud the name of each picture below.
Tap as you hear each part (or syllable) of the word.



Sounds of ou

ou can sound like the u in nut:
touch double young

ou can sound like the ou in out:
pound bough loud

ou can sound like the oo in boot:
you soup wound

ou can sound like the o in hole:
though dough soul



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Scissorettes

The smaller pictures on this page were made by children, using these shapes. See how many interesting things you can make.

From black and white paper, cut shapes like those above. For the circular pieces, use a compass or draw around objects such as a quarter or a paper cup. Do not cut your book. Make several sets. Keep each set in a separate envelope. These are the **ONLY** shapes you will use.

You need not use all the pieces in any one creation, but you should use each piece **ONLY ONCE**. Be sure to do the work yourself. When you have arranged the pieces to make a picture you like, glue the pieces onto colored paper and give it a title.

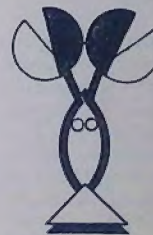
Send your best picture to Highlights for Children, Honesdale, Pa. 18431. Don't forget to put your name, age, home address, and zip code on the back. Please send only one picture. Perhaps it will be printed in a later issue of HIGHLIGHTS. No pictures will be returned.



Balloon
George Rodenhaver, Age 5
Southampton, Pa.



Lookout Tower
Larry McRae, Age 7
Banning, Calif.



Lobster
Hope Winchester, Age 11
Honolulu, Hawaii



Frog
Lee Anne Pantuso, Age 10
Newtown, Conn.



Fire Engine
Mark White, Age 10
Rogers City, Mich.

Lyndon B. Johnson 1908-1973

The Man From Texas

By Paul A. Witty
Professor Emeritus, Northwestern University

Lyndon Baines Johnson was born on a farm near Stonewall, Texas, August 27, 1908. The story is told that his grandfather rode through the countryside to announce to his relatives and neighbors: "A United States Senator was born today—my grandson."

Lyndon's father, Sam Ealy Johnson, Jr., served five terms in the Texas legislature. He also worked as a rancher, trader, and real estate dealer.

His mother, Rebekah Baines Johnson, gave her children affectionate care and great love. She was an intelligent woman who was always interested in their education. Before Lyndon attended a one-room school at four years of age, he had learned to read. By five, he was reciting poetry he had memorized.

Lyndon was five years old when the Johnson family moved to a rambling frame home in Johnson City, a village with a population of three hundred. He and his brother and three sisters spent many happy hours in their large yard in which there was a barn. There was plenty of room for baseball games. Lyndon enjoyed riding horseback and hunting. With friends he would hitch up a cart and drive to the Pedernales River for picnics or swimming. At times during week-ends and vacations they would pick cotton on his father's ranch or work on nearby farms.

The Johnson family was of moderate means and had little money in cash. Lyndon earned his own spending money. At one time he shined shoes at the local barber-shop. Sometimes to earn his admission he passed out leaflets for the silent films shown in the "Opera House."

Lyndon's mother, besides caring for her family, was active in community life. She directed plays, taught "expression" lessons in her home, and helped coach members of the high school debating team. Lyndon was a winner in the county debate contest when he was a senior in high school.

Throughout his years in school, Lyndon was interested in conversations about politics in his home and among his father's friends. He went with his father in their Model T Ford when Sam Johnson, Jr., was campaigning for reelection. He also attended sessions of the Legislature in Austin.

Lyndon graduated from high school in 1924 when he was fifteen years old. He read the class poem at the commencement for his graduating class of six students.

Soon after graduation, Lyndon and some of his friends went to California. After a few months in efforts to earn a living, he returned to Johnson City. He found a job working on the highway.

One cold day, Lyndon came home



President Johnson and his wife Lady Bird.

from work and said that he was ready to try working with his brain. His mother telephoned the Southwest Texas State College in San Marcos. With some money from his parents and a loan from a bank, Lyndon left for college in February, 1927, and began college classes in March.

Like many students, Lyndon worked to help pay his expenses. His first job was as a janitor. Then he became assistant secretary in the president's office. He was a member of the debating team and was editor of the *College Star*. His editorials were on varied topics, such as desirable personal traits and characteristics. On personality, he wrote, "Let your brow touch the sky. Force others to look up." He had great admiration for the Constitution and for the Founding Fathers and often wrote about these subjects, too.

At the end of his second year of college he became principal and teacher for nine months in a school for Latin-American children in Cotulla, Texas. He earned enough money to finish college.

After college, Lyndon taught debating and public speaking in the



The Lyndon Baines Johnson Library in Austin, Texas.

Sam Houston High School in Houston, Texas. His debating team was widely acclaimed. In November of his second year in Houston he accepted a job as personal secretary to newly-elected Congressman Richard Kleberg.

In 1932, Lyndon Johnson went to Washington where a new world awaited him. He lived in a hotel with other ambitious young men. It was like a debating club, and debating was a skill he had mastered. Lyndon Johnson was soon recognized for his informed attitude and judgment in regard to important political issues. Many stories are told of his generosity and loyalty to his family and friends.

On a trip to Austin, Texas, he met Claudia Taylor. A nursemaid had once said that she was as pretty as a ladybird and the name stayed with her. Lyndon and Lady Bird were married in San Antonio on November 17, 1934. They had two daughters, Lynda Bird and Luci Baines.

Lady Bird Johnson, like Lyndon's mother, was a source of inspiration to him. The ambitions of both women centered in the fulfillment of his hopes. Lady Bird encouraged

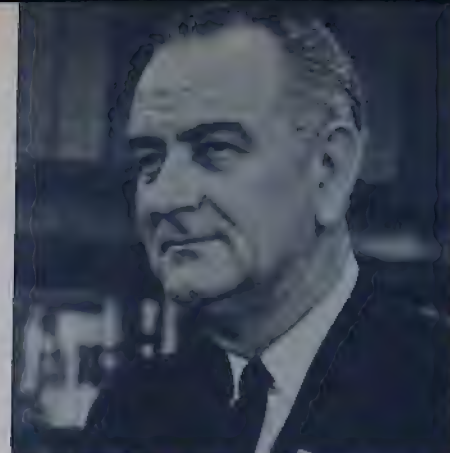
him to attend law school in Washington to prepare for greater leadership in politics.

By 1935, there were millions of unemployed young people in the United States. The National Youth Administration was set up mainly to provide jobs for these young people. Lyndon Johnson was appointed director of the program in Texas. Soon he developed a plan to employ twelve thousand young people and to help eighteen thousand others to attend school. This program attracted nationwide attention.

In 1937, Johnson entered the Congressional race. He was elected Congressman from Texas when he was twenty-nine years of age.

During President Eisenhower's administration, Lyndon Johnson became majority leader in the Senate. In this role his hard work, loyalty, and foresight were greatly admired.

In 1960, he was John F. Kennedy's running mate and was elected Vice President. When Lyndon Johnson followed John Kennedy as President, he was well prepared by his long career in the House and Senate as well as by his experience as Vice President. He



Lyndon B. Johnson, 36th President of the United States.

dreamed of a "Great Society" and introduced legislation in behalf of human welfare. His greatest contribution was in civil rights legislation.

After completing the unexpired term of President Kennedy, Johnson was elected in 1964 to serve a full four-year term. He continued to carry forward a program in which the rights and welfare of all Americans might be assured.

In his State of the Union address in January, 1965, President Johnson said, "A President's hardest task is not to do what is right, but to know what is right."

The long war in Vietnam was a constant worry to President Johnson, who received widespread criticism for his role in escalating the war. He felt the country would be better served if he did not run for reelection and announced his decision in March, 1968.

At the end of his term Lyndon Johnson retired to his beloved Texas ranch. There he worked on his autobiography and continued his business and social activities.

President Johnson died at his home on January 22, 1973. He was buried with his ancestors in the Texas Hill Country so dear to him.

Science Questions

Answered by Donald H. Menzel

Professor and former Director, Harvard College Observatory
and Senior Scientist, Smithsonian Astrophysical Observatory

In our science book, the pictures of the moon appear perfectly round, which is contrary to what we have learned. There is also a large map of the moon which is spherical in shape. We know that the earth is pear-shaped and the moon a little more spherical, but all the pictures and globes we have seen are perfectly round. We are wondering why they are shown this way.

William England
Geoffrey Oliver
Reading, Mass.

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Both the moon and the earth are very nearly spherical. I think it is a greater error to say that the earth is "pear-shaped" than to say that it is spherical. The diameter of the earth at the equator is only about 27 miles greater than the diameter through the poles. If you made a perfect model of the earth about 18 inches in diameter it would have less than 1/16 of an inch variation in diameter.

The statement about a "pear-shaped" earth came from very accurate measures from satellites. The earth's South Pole is slightly "squashed in," while the North Pole bulges out. This is like a pear in effect, but the total bulge, in or out, is not very much. You wouldn't see it at all on a scale model of the earth. Even so, the mouth of the Mississippi River is farther from the center of the earth than its source. If the earth were to stop spinning, the river would flow backwards.

The moon also is almost but not quite a sphere. It is slightly egg-shaped. One axis is about 3 miles greater than the other.

I was looking up one night and wondered how I could tell a star from a planet.

Edward Chung
Granada Hills, Calif.

All of the stars are such a great distance away from us that they always appear in the same pattern in the sky. That is why we can talk about

the constellations. The stars in the Big Dipper always form a pattern like a big dipper. The position of the star pattern rotates around the sky, but that is only because of the motions of the earth. The planets are much closer to us than are the stars. So the position of a planet in the sky is affected by both the planet's motion and the earth's motion. On photographs of the sky, taken night after night, the position of a planet changes with respect to the stars.

Another method, which is sometimes used, depends on the fact that stars usually twinkle, changing brightness and color. The planets, on the other hand, shine with a much steadier light. The difference is caused by the fact that the stars are so small as seen from the earth. They are really just points. Planets, however, are large enough so that, even if the individual parts of the surface twinkle, they don't all twinkle at the same time in the same way. So the planets tend to shine with a much steadier light.

Why is it that when you look through a magnifying glass, if you are looking at something far away, it is always upside down? I have been wondering about this for a long time.

Joe Bauer
Tulsa, Okla.

The answer is that, under such circumstances, you are not really looking through the magnifying glass but at an image formed by the glass. And these images are upside down. You can try this experiment easily for yourself. Hold up the magnifying glass near a window and bring a piece of white paper up behind it to a distance of perhaps four or five inches. Move it in or out and you will suddenly see a picture projected on the paper. Look carefully and you will note that the picture is upside down. The sky is at the bottom and the ground is at the top.

This image is still there in space for you to see, even when the paper isn't present. And so the image appears upside down when you look at it.

In order to give the best possible answers to your questions about science, I often send them to scientists who know more about them than I.

—Jack Myers
Science Editor

I wonder if you think there is another planet farther away from the sun than Pluto. If so, do you think there might even be another solar system?

Erin O'Shea
Ft. Wayne, Ind.

I would think there is a good chance that there might be another planet farther away from the sun than Pluto; but probably it would be difficult to find. Pluto itself is so extremely faint that we have to take very long exposures with our big telescopes in order to find it. Of course we don't know how large that planet might be. It might be even much smaller than Pluto, which is pretty small.

You ask also whether there might even be another solar system. Well, as we look out into space, we see thousands of stars even with the naked eye. And our telescopes reveal many millions or even billions of others. These are stars very much like our sun—some brighter, some fainter, some hotter, some cooler. If our sun could develop a planetary system, I don't see why other stars couldn't, too. I would guess, therefore, that there are many, many solar systems other than our own. But of course that is just a guess. However, astronomers have found what appears to be a planet about the size of Jupiter revolving about the nearby, faint star known as Barnard's star.

Girl: "The other birds are all building nests. What about you?"

Cowbird: "I don't bother to build a nest. I will lay my eggs in the nests that other birds have built. I know that they will even take care of my babies after they hatch my eggs."



Jonathan's House

By Ivy Eastwick

North, South, East, or West—the house where you live is surely the best. Except to Jonathan James O'Shay who was always threatening to run away.

His mother pleaded, "Oh, Jon! Don't go. Your father and I would miss you so."

His uncle begged and his auntie sighed. "Oh, Jonathan dear, the world's so wide, so please stay here. Don't run away."

"I'm coming!" snapped Jonathan James O'Shay. "Maybe tomorrow. Maybe today."

The house where he lived was a cheerful place (except for Jonathan's scowling face). It had painted walls and pictures gay and windows which caught the sun each day.



"North! South! East! West! Home is the place which you love the best," muttered the house to itself one day while Jon was threatening to run away.

"I'm tired," said the house, "of this stupid Jon who has always threatened but never gone. So—when he returns from school today, he will find that I have run away."

And so it was.

At half-past four there was not a sign of house, or door, or balcony red, or garden green. There was just a gap where the house had been.

Jon's mouth became a BIG ROUND O.

"My house has gone! Did you see it go? It was here at lunchtime, from twelve till two. Has anyone seen it? You? Or you?" he asked the neighbors, who said:

"John J! Why shouldn't your nice house run away? You've no cause to grumble, oh dear, no. You were always threatening you would go."



Jon ran to the East. He rushed to the South. He dashed right down to the river's mouth. He asked fish, and rabbit, and little dormouse: "Have you seen a sign of a runaway house?" Rabbit said, "No." Dormouse said, "No."

Fish in the river's mouth said, "Oh, I've seen whales and sharks and mermaids green, but a runaway house I have never seen."

Jon searched the North, South, East, and West. He sighed. "Of all places home was best. If only the house would return to me I'd be TWICE as good as a boy should be."

He flung himself down on the clovery grass and watched the sun and the shadows pass.

He saw the birds fly away to rest—each had a home. A treetop nest.

He watched the rabbits run home to sleep in hideaway burrows safe and deep.

He watched the muskrats swim with speed to their houses built among rush-and-reed.

Everyone had a place to stay.

Excepting Jonathan James O'Shay. Jonathan's house had run away.

Then he hid his face in the grass and clover and fell asleep while the night passed over.

When he awakened—where was he?

In exactly the place where he wished to be.

In his own bright room with the sun looking in through the curtains with, oh, such a cheerful grin.

Here were his books and toys and things—his clockwork dragon with whirling wings, the model cars, the giant jet plane—

Oh, Jonathan James was home again.

"I'm back! It's back! We have come to stay. We have both been dreaming," said Jon O'Shay. "My good little house did not run away."



Illustrated by Lois Aarman

Will Earns His Mark

By Marilyn Kratz

Will filled the melting kettle with tin and copper for the next day's pewter. Then he came to look over his father's shoulder.

"That's the finest platter you've ever made," said the boy.

"You have said that before, Son," Mr. Wickham said, laying his hammer aside. "This time I hope you are right and I hope General Brighton agrees."

"It's not fair!" Will blurted. "There are other orders ahead of his. But they must wait while you make an entire set of pewter platters for him. How long must we allow the British to order us about?"

"We are English subjects," Mr. Wickham said.

"I'm an American!" Will protested. "Someday soon, our country will be independent."

"There is much talk of that lately," said Mr. Wickham. "I wonder if these struggling colonies are

ready for freedom." He turned the platter over and, using a metal form, placed a crown design on the back.

"Why do you use that English-style mark?" Will asked scornfully.

"I am proud to place that mark on my pewter, for I always make my pieces as fine as I can," said Mr. Wickham sternly. "When you have become a skilled pewter craftsman, you may choose a mark of your own. Now, clean the shop before supper."

"Yes, sir," Will mumbled as his father left the shop. "Someday," Will thought, "I will be a fine pewterer in this new country."

After sweeping the shop, Will gathered the bits of pewter left on the worktable. These he carried to a box at the back of the shop.

"At last I have enough scraps to make a porringer for Mother's birthday gift," he said to himself. "I hope I can finish it in time."

The next day, after Mr. Wickham had left the shop, Will melted the scraps of pewter. Then he carefully poured the grayish liquid into a special mold. He hid the mold under a cupboard.

"Tomorrow, I will take the porringer from the mold," he thought as he cleaned the shop.

Will could hardly wait for his father to quit working the next day. But Mr. Wickham worked longer than usual. Finally he said, "Will, we must come back to the shop each evening to work until I finish the platters for General Brighton. You will clean the shop in the mornings before school."

"But, Father . . ." Will began to protest.

"Will!" Mr. Wickham silenced his son. "I know you resent the British soldiers. But I have been given a job to do. We must work extra hours to finish it in time."

"Yes, Father," Will said, wondering how he would ever find time to work on the porringer.

Will couldn't sleep that night. He kept thinking of the hidden pewter. At last he got out of bed. He dressed and went to the pewter shop.

It was cold and dark in the shop. Will lit a candle. He removed the pewter from the mold and began to work.

During the next few weeks, Will made many nighttime trips to the shop to work on the porringer. It was two days before his mother's birthday when he finally finished it. He polished it until it gleamed. Then he set it on the table and eyed it critically. He had designed its simple, graceful lines. "Is it a good piece?" he wondered.

Will turned the porringer face down on the table. Using a sharp tool, he etched his mark onto the bottom of it. Then he wrapped it in a soft cloth and placed it far back in the cupboard.

The next afternoon, General Brighton and another soldier entered the shop.

"Good day, Mr. Wickham," said the general. "How are you progressing with my platters?"

"We have two left to make," said Mr. Wickham. "You may see the platters I have finished."

Mr. Wickham led the two soldiers to the cupboard at the rear of the shop. He took two platters from the cupboard and gave one to each man. Will watched them examine the pewter platters.

"Very good," said the general. "I see your mark is similar to that used by English pewterers. I presume you learned your craft in England."

"Yes, sir," said Mr. Wickham.

Will felt like shouting, "He is an American pewterer." But he remained silent.

As the general reached into the cupboard to replace the platter, his coat cuff accidentally brushed the cloth off Will's porringer.

"Ah, a porringer," said the general lifting it out. Will held his breath.

"This design is quite unusual," observed the general. "What a lovely piece of pewter." He turned it over. "The mark is unusual, too."

Mr. Wickham looked at the porringer in surprise. "Gentlemen," he said with a smile, "this porringer is the work of an American pewterer—my son!"

Now General Brighton looked surprised.

"Well, you colonists are developing some skilled craftsmen," he said. The other man agreed.

After the soldiers had left, Mr. Wickham said, "Will, you have earned the right to your own mark."

"Thank you, Father." Will beamed as he touched the mark he had made on the porringer. "I shall always use this mark—a proud American eagle."

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★ A fictional story of a boy of the Revolutionary period.



Illustrated by Tom Dunnington

Tunisia

From Tunis to Cave Towns and Cliff Villages

By Richard Wolkomir



People who live on the desert have learned that painting their houses white reflects the sun and keeps them cool.

Looking down the courtyard shaft of one of Matmata's underground homes. Each entrance leads to a separate room.



Your town would amaze a visitor from southern Tunisia. The paved streets and sidewalks, so many cars, television antennas, trees and grass—he'd be amazed.

His town is much different. Tunisia is in North Africa. To get there, you'd probably board an airliner and fly east across the Atlantic Ocean. Your plane might refuel at Paris or Rome. Then you'd fly south, down the long boot of Italy and out across the deep-blue Mediterranean Sea. After crossing Africa's northern coast, you'd land at Tunis, the capital of Tunisia.

The highway from the airport into the city of Tunis is crowded, not only with cars and trucks, but also with horse-drawn wagons, men riding burros, and carts drawn by donkeys. Orange trees and palms line the road, and all the buildings are white.

On the city streets, some people wear ordinary-looking suits and dresses. But many men wear a long, hooded robe, called a *burnoose*, and a brimless red hat, called a *chechia*. And you will see women wrapped from head to toe in a gauzy, white cloth, called a *sefsari*.

Tunis isn't like American cities. Yet, with its department stores and beeping cars, it isn't nearly as exotic as the little towns far to the south, at the edge of the Sahara Desert.

Driving south from Tunis, you'd watch the landscape become ever drier and browner. Soon, you'd be driving across flat, stony plains, called steppes. Far out, you might see a camel caravan inching along the horizon like a line of ants. Sometimes you'd spot the black tents of Bedouin—nomads who roam the steppes with their herds of camels, sheep, and goats.

At last, you'd drive up into the mountains rimming the Sahara. Dry

and barren, they roll from horizon to horizon like waves in a frozen, brown sea. Overhead, the sun is hot and brassy.

That men could live here seems unbelievable. Yet the Berbers have been thriving in these barren mountains for thousands of years.

The first Berber town to visit—Temezzet—has no road. To get there, your car must bounce up a donkey path, higher and higher. Then you see the village, perched like a cap of brown stones on a mountain peak. In the town, you find that each street is a steep, stone stairway, carved into the rock of the mountaintop.

Only little boys are in the streets to meet you. Older children are at school. The men are working—some in their tiny gardens, hidden here and there on the barren mountainsides, where they grow barley and wheat, and palm, fig, and olive trees. Others are herding sheep and goats. All the women and little girls, too shy to meet strangers, are hiding in their stone houses.

Temezzet has no cars and no electricity. The only sounds are people talking, donkeys braying, and the wind whistling among the stone buildings. Oil lamps light the houses at night, and all water comes from a community well. Every morning the women bake bread in outdoor ovens made of clay. They also cook *cous-cous*, a stew of wheat grains, vegetables, and a hot-pepper sauce. Instead of cows' milk, the Berbers drink goats' milk.

Temezzet's children help their parents with housework and the gardens, tend the sheep and goats, and go to school. They also play games, such as tag, or pretend they're grown-up herdsmen, wandering the mountains. Sometimes they climb Temezzet's towers, where they gaze at the brown mountains and,



The desert nomads are "at home" anywhere they pitch their tents on the Sahara.



Perched like a cap of brown stones on a mountain peak—the town of Temezzet.



A street in Ksar Hadda Da.

far to the south, at the dunes of the sandy Sahara. They wonder what's beyond those mountains, and beyond the desert.

The next town to visit, Matmata, has over three thousand residents. Yet, standing at the village center, you wouldn't see a single house—only brown, rocky hills, patched with grass, where sheep, goats, and camels graze, and tiny hillside gardens.

Where's Matmata? Underground. The villagers are called troglodytes, which means cave-dwellers, and their homes are all caverns in the soft stone of the mountains. Since there are no trees for wood, it was easier for them to build homes by digging into the ground.

A great shaft up through the rock is each home's sunlit central courtyard. Because it almost never rains here, the troglodytes can use this roofless courtyard as a combination parlor, kitchen, and dining room. Whitewashed, wooden doors in the courtyard's rock wall lead to caves. Clean and whitewashed inside, each cave is a separate room of the house. Some are bedrooms, and some are storerooms for the family's figs, dates, olives, wheat and

barley, peppers, and other vegetables. A passageway leads outside.

The Berbers of a nearby village, Chenini, live much as the people of Temezzet and Matmata. Yet their village is far different.

Snaking across the flat top of a broad plateau is a high, vertical cliff. And Chenini—built partly of caves dug into the cliff wall and partly of stone blocks—clings to the cliffside like a big brown fly. It resembles the villages of Pueblo Indians in the United States Southwest.

In Chenini, each street's outer edge is the cliff, a straight drop to the plateau, hundreds of feet down. Yet the children, donkeys, and white Berber dogs who run along the streets never become dizzy from looking over the edge—they've never known any other home than this one, clinging to the cliff's flank.

Many miles south of Chenini is a much different town, called Douz. Instead of being in the mountains and high plateaus at the Sahara's edge, Douz is out on the great desert itself.

The Sahara Desert is like a vast ocean of sand, with sand-dune waves. Islands in a water-ocean are dry spots. But islands in this dry

sand-ocean are moist spots, where springs bubble up and create a green oasis. Douz is such an oasis, where wells provide water to drink and palm trees offer shade from the burning sun.

All streets in Douz are made of sand. Houses are masonry cubes, painted white to reflect the sun. To keep the insides shady and cool, they're windowless, except for a few thin slits. The people wear hooded robes to keep the sun off by day and the desert cold out by night.

Douz is a market town, where dwellers of oases far out on the sand come to trade, their camels loaded with the dates and olives they grow and the colorful rugs and blankets they weave. The children of Douz never tire of gathering at the *souk*, or market-place, to watch their fathers trade manufactured goods and vegetables with these mysterious sunburned men who live far out on the sand.

To these children, and to the children of Temezzet, Matmata, or Chenini, a town like yours would be astonishing. To them, you live in the exotic and strange world beyond the mountains and beyond the desert.

Billy and Pete sat on the sun-baked steps and munched sunflower seeds.

"My grandma says a little old seed like this"—Billy held up a seed, then cracked the shell to get the soft kernel inside—"would grow six feet high."

Peter laughed. "I don't believe it," he said as he tossed a handful of shells to the sidewalk.

"My grandma should know," Billy insisted. "When she was little, she lived on a farm near a small town."

"Yeah—but she might be fooling us," Peter argued. "I just don't believe it."

The boys lived in a tall old building in a crowded city. A long time ago, it had been a nice home. Now, it was divided into several apartments where big families lived. No one ever planted flowers or grass anymore.

Billy poured the last few seeds into his hand and stared at them. Then he put them back into the little plastic bag.

"I'm going to plant these," he said, "just to see what happens."

"Where will you plant them?"

Little Things Grow Big

By Annie Talabere

Pete laughed again. "Don't be silly!"

"Well—let's see." Billy put the bag into his pocket. Then he walked around the building. He found a place where a narrow walk led to the back entrance. There where the porch joined the house was a corner of ground. Paper sacks and cans littered the spot. Billy filled a sack with the rubbish until the spot was cleared.

Pete became interested. "Let's play we are cavemen," he suggested. They sharpened sticks and tried

to dig into the hard, dry ground. Several other boys gathered to watch. Then one poured a can of water on the dry earth, which made it softer. All the boys wanted to help. They even tore an old newspaper into tiny bits and dug it into the soil to make it loose. They soaked the spot.

"Now let's plant the seeds!" Billy said grandly. "There are six left."

The boys placed sticks around their garden so no one would walk on it.

Several days passed. Nothing happened. Then suddenly, the ground rose in one spot and a little bent shoot of green came out. Then another. And another. And another. All the boys in the neighborhood watched Billy's garden.

Peter wouldn't pay much attention to it but he didn't laugh anymore. Four brave little green shoots pushed out of the ground.

One day when no one was around, Peter came over and looked at the garden.

"I don't believe it," he muttered. Then he stooped down and pulled one of the green shoots out. Sure

enough, there was a split sunflower seed clinging to the green shoot and white roots hanging down.

Pete didn't want anyone to see what he had done so he tossed the bit of green out into the street. Cars and trucks soon mashed it flat.

Next morning, Billy counted his little plants. "One is gone. What happened?" he asked the boys. No one knew. Pete tried to look innocent.

Every day the three little plants grew. Then for two days, Billy forgot them. Those were the hot days when Grandma took the boys out to the zoo. When Billy remembered his garden, the three little plants were limp and wilted. He poured water on them. Two slowly revived but one turned yellow and died.

"I think a dog stepped on it," Billy said. "It is broken off."

Now the boys took better care of the two that were left. They grew and grew—until the baby in the downstairs apartment wandered out on the walk. She saw the green plants, something new in her world. She wrapped her little fingers around one and pulled.

When Billy found her, she was

happily chewing his sunflower plant and had already swallowed most of it, dirt and all. Billy became discouraged. No one seemed interested in his sunflowers anymore.

But the sunny days slipped past. Every day he watered his one plant. Up it grew and up. After awhile it was taller than the boys. Daddy put a strong rope around it and tied it to the building so the wind wouldn't blow it over.

When it was taller than Daddy, a big round yellow bloom topped the plant. It seemed to nod at the sun. It looked like pictures of the sun that the boys drew in school.

"That's why it is called a sunflower, I guess," Billy said proudly.

Soon the center grew bigger and bigger and then the yellow petals dropped off.

"It's full of seeds," Pete said one day.

"Enough for all of us," Billy added.

"From just one little old seed. I still don't believe it!" Pete laughed.

"I've been thinking," Billy said slowly. "Most everything starts from something small."

28



Illustrated by Lois Avenell

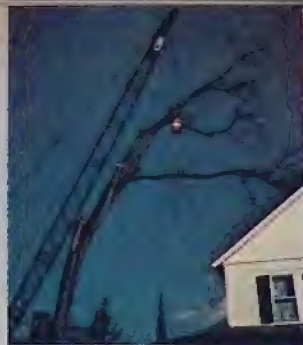
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Riddles Selected by Children Seven to Twelve Years of Age

1. What does a farmer grow if he works very hard?
Peter Anderson—Michigan
2. What did the new suitcase say to the old one?
Lisa Williams—California
3. Why did the robber take a bath?
Todd Abrams—New Jersey
4. What's worse than a giraffe with a sore neck?
Susan Moore—Minnesota
5. If you were surrounded by twenty lions, fifteen tigers, and ten leopards how would you get away?
Elizabeth Root—New York
6. What has everybody seen but will never see again?
Lisa Hamel—Tokyo, Japan
7. What is bought by the yard but worn by the foot?
Loukas Koupodontes—New Jersey
8. How can you travel fairly fast, yet never get far from the first place you passed?
Kay Williams—South Carolina

Answers:

1. A crop. 2. You're in and out. 3. To make a lion get away. 4. A compass with north. 5. Stop the merry-go-round and get off. 6. Yesterday. 7. A carpet. 8. Go back and forth on a swing.



Held aloft by the 90-foot crane, a workman saws away a top branch.

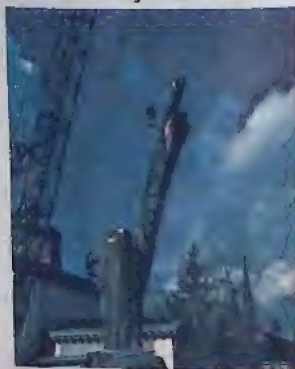


Sawing completed, a workman and his oil-drum "elevator" are safely out of the way as the branch is lowered.

With an enormous tug, the crane cracks the partly sawed-through branch.



A check of the giant trunk before the crew begins final moves.



Photographs by Joan and Janet Stegner.

Fungus Destroys an Elm Tree

By Jack Myers, Science Editor

Our editorial office is a great big old house. It was built about 120 years ago.

Behind the house we had an elm tree. Elm trees grow throughout all of the eastern United States. They are gracefully shaped and often planted around homes as shade trees. When they have been cared for through the years they can grow to be very large trees. Ours was such a great tree. We once pinned some tape measures together and found that it was 18 feet around the trunk at the height of a man's chest. Its trunk rose to the roof of the house before it separated into three huge branches. Its smaller branches above carried a leafy canopy up more than a hundred feet high.

Now our great elm-tree is gone. It was very sick from a disease that is killing many other elms in the eastern United States. Most of its leaves had dried up last summer. We wondered how a tough and rugged elm tree can get a disease that can kill it in a year or two. With the help of our State College of Agriculture and its Forest Advisory Service and its Extension Service we learned about the Dutch Elm Disease. The disease is caused by a special fungus which grows as tiny threads that plug up the water-carrying tubes of the trunk or branches. Then the leaves cannot get water; they dry and curl up. Then the tree has no leaves to make its food.

The fungus cannot get in through the bark of a healthy tree and has no good way to travel from one tree to another. But there is a special carrier of the fungus, a little beetle which lives only on elm trees. The elm bark beetle can chew and burrow its way into the bark of an elm tree. To lay its eggs it chooses a sick or dying tree where the bark has partly dried. The eggs develop into little white grubs or larvae which live on the inner bark. In time the larvae develop into adult beetles which burrow out through the bark. For food the adult beetles like the bark on the small branches of a nice green healthy elm tree.

Now you can see how the fungus is carried from tree to tree. A beetle which grows up in a diseased tree is likely to carry some of the fungus on its

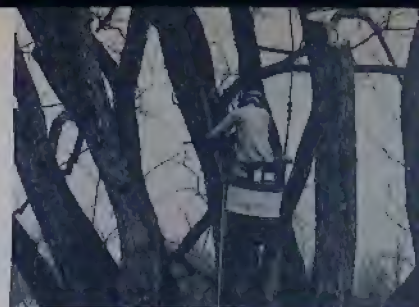
body. Then it goes off in search of a healthy tree to chew on the tender bark of its branches. No one has found any way to stop the spread of the fungus in a tree once it has gotten down into the trunk. The only way to stop a spread of the disease is to cut down and burn up all the diseased trees. There was nothing to do but to cut down our sick tree.

How could such a big tree be taken down? Out in the woods a tree may be cut at the base and allowed to fall. But our great tree grew among houses. The Shannon Tree Company of Milford, Pennsylvania, said they could do it. They hired a big crane with a boom ninety feet long. Usually such a crane is used in construction of tall buildings. This time it was to take down a tree. The upper limbs were cut one by one and gently lowered to the ground. Then the main trunk was sawed in pieces, and then each piece was lifted off onto a truck. Naturally all this caused a lot of noise. People came to watch the great tree come down, and it was hard to work in the editorial office.

Like other plants a tree starts its life as a little sprouting seed. Then it becomes a tender shoot which grows upward as its roots grow downward into the soil. The shoot becomes a little woody stem. Throughout its life it has two growing parts. One is at the tip where new cells are formed to make it grow upward. Around the stem there is a second growing part. Here new cells are formed to make the stem grow thicker as it becomes the trunk of the tree. Some of the new cells push outward toward the bark and serve to carry a sugary sap from the leaves down to feed the roots. Other new cells become thick-walled little tubes pushed inward toward the center. They serve to carry water from the roots up to the leaves.

If you look at any freshly cut stump or at the end of a log you will see a series of rings, small ones at the center. These were formed, one ring each year, starting from the center. Each spring the cambium becomes active and makes a new ring of the water-carrying tubes. Only the outer rings really carry water. After a few years they become crushed together to form the heart wood of the trunk. But even so they still show the ring pattern. So by counting the rings on a stump you can tell how old the tree was.

We counted the rings on the stump of our tree and found that it must have been 131 years old. We wondered how many children had played underneath our tree during its long lifetime.



This "forest" of branches all grew out of the large central trunk.

With a power saw, a workman frees a section of the 131-year-old elm.



Crane operator carefully swings the huge trunk out to the waiting trailer.

A view from the roof of Highlights shows the remaining trunk.



The crane lowers a large section of branch onto the trailer.



Photographs by Stanton-Dennis Studio

Our Own Page

The Year Has Passed

The year has passed, and somewhere, deep inside me, I feel lonely. Today is the last day I will sit at this desk, in this room, in this very school, for a long time, if ever. I'm thinking over the past days, wondering why do I feel this feeling—why?

Maybe it's loyalty to my classmates, my teacher, my studies. Or maybe it's more the feeling of happiness at accomplishing what I meant to do, or perhaps I need the comforting thought that even though I don't understand, my teacher can, or does, understand, and will in some way help me to understand.

Still, it must go deeper; maybe the fact that in school I can prove I'm worth something, that I can do things well, if only I prove it to myself; maybe that is the cause of this feeling.

The fact that my teacher has helped me, that I consider her a friend, that she respects my will, and that I respect hers, all this ties in, somehow, along with the fact that my classmates are really my friends. . .

And, yet, still. . .

The year has passed, and somewhere, deep inside me, I feel lonely.

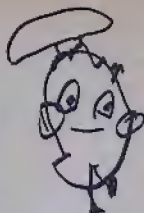
Nancy Boyleson, Age 11
Nazareth, Pa.



Paul Hopper, Age 8
Sulligent, Ala.



Mike Munsterman, Age 4
Kansas City, Mo.



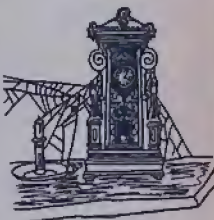
A Baker
Erica M. Oh, Age 2
Chicago, Ill.



Jay Yvisaker, Age 9
Gresham, Ore.



Bridget Camplon, Age 5
Pittsburg, Kans.



Amanda Wood, Age 9
Seattle, Wash.

Saturday

A little bird flying across the wide, blue sky;
A ladybug crawling through the tall, green grass;
A busy bee flying from flower to flower;
All on a sunny Saturday.

Robin Curtis, Age 12
Culver City, Calif.

Life

As the wild horses bolt up
The rocky cliffs, then down to
The gentle plains—
This to them is Life.

As the ducks float along the
Waters with a gentle air—
This to them is Life.

As the squirrels scamper around
And gobble down nuts—
This to them is Life.

As we the people work and play
Together—this to us is Life.

Anneliese Meadows, Age 8
Espanola, N.M.

June Jollies

June Jollies are a happy group
Who play all night and day.
They live in a little house
Underneath some hay.

The Jollies sometimes look like
Bark upon a tree,
But sometimes look like raindrops
That fall on top of me.

The month of June brings Jollies
In fields and forests green.
So keep your eyes wide open—
A Jolly may be seen.

Douglas Dean, Age 9
Chittenango, N.Y.

I Like To Go With My Daddy

I like to go with my daddy, all by myself.
It's like having your own private shelf.
He takes me where he would nobody else.
Except he and myself.

Jane Dondlinger, Age 10
Brown Deer, Wis.



Why My Dad Is Special

Last June HIGHLIGHTS asked its readers to write about their dads. Here are parts of some of the many letters we received from boys and girls all over the country. We hope that reading these letters will make you think of the ways in which your dad is special to you.

My dad is so special because he is so loving and kind.

He will stop doing something he really enjoys and take me anywhere I really want to go.

When it is hot he will take me, along with my sisters, down to the beach.

My dad shows me right from wrong. He helps me when I don't understand something. He is a great father.

Jonf Jo Devitt, Age 11
Gulf Breeze, Fla.

He gave me a home to live in and a dog and a piano and a good mother.

Karlene Duckless, Age 8
Newport, Vt.

It makes me feel good that someone special is near. He can help me with my problems and can make me feel really good. My dad makes rainy days into sunny days.

Lauren Jacey, Age 9
E. Brunswick, N.J.

I love my dad very, very much. He is so great, because almost every night he corrects my homework. He explains, too. He is so patient. I never met a person so patient and calm. When a problem comes up he solves it calmly and quickly. I thought he was a teacher, because he is so smart, patient, and understanding. I always tell him my problems and he has a way to figure them out. And they work, too. I love my dad and I hope he lives forever! I love him very much!

Mary Molnar, Age 12
Evergreen Park, Ill.

My dad is goodie because sometimes he tickles me at night on most commercials! We take turns reading the funnies. I read the eases, he reads the hard ones!

Brooks Cochran, Age 6
Reno, Nev.

He buys food for me. He goes for bike rides with me. He keeps our grass looking pretty. He takes good care of me and my family.

Joyce Wardlaw, Age 6
Madison Hts., Mich.

My dad is special because he plants flowers, lets me drink from the hose, plays "catch" with me sometimes, and he lets me water the trees.

David DeStefano, Age 5
Crown Pt., Ind.

My dad is special because he is very kind and fair. He isn't too strict, but again he doesn't spoil us. Whenever someone does something wrong he punishes them but not too badly. He also helps us with our homework.

My dad is special to his mother because he is constantly helping her at her store. He is special to Mom and us kids because he supports and helps us. He is special to his fellow workers because almost all the time you see him helping them and doing extra things for them.

Laura Kukor, Age 13
Cudahy, Wis.

I think that my father is special because he takes me out a lot. I love my father a lot. I think he is handsome. I can buy ice cream whenever I want. I like when I eat because I can sit next to him. Sometimes I can go to work with him. He is the kind of father that you can cuddle on a lot. I wouldn't have been able to play the organ if my father didn't know how to play it. Sometimes he takes me bike riding. My father likes to know what's happening in school and he reads me a story every night. I love my father a lot.

Kim Louise Wood, Age 7
West Babylon, N.Y.

My dad builds us things and he lets us help every time.

Evan Benjamin, Age 8
St. Louis, Mo.

He carries me to the bathtub by the feet.

Denise Stewart, Age 4
Huntington Beach, Calif.

He arranged to go to two-week camp! And when we are sad or something he will make up jokes; he likes to be funny. He is concerned about our health and does not care about how it costs when it comes to health.

Patty Fulton, Age 8
Colorado Springs, Colo.

Make your drawings with black pencil or crayon on white paper about eight by eleven inches. Print your name, age, street address, city, state, and zip code on the back. Enclose a note from your parent or teacher stating that the stories, verses, or drawings are your very own—that the drawings have not been traced or copied from pictures, and that you have not read or heard the stories or poems anywhere else. Mail to: Highlights for Children, Honesdale, Pennsylvania 18431. No child's contribution will be paid for, or returned.

★ Children throughout the country tell why their fathers are so special.

(continued on next page)

(continued from page 33)

Anytime I need help, he helps me. He is nice to me, plays around sometimes, and makes up puns—which are sometimes funny. (I don't get all of them.)

James Ehrlich, Age 7
Natick, Mass.

My dad is very special because he is always thinking of something special for the family. He takes us camping, on picnics, and plays with us. When it comes to school projects, he is always there to help.

One thing my dad taught me is to make and appreciate home-made things—that's what brings more happiness than anything money could buy.

Another thing I really like about my dad is that he is always there when I need him. The best thing, though, is that he's mine, and he loves me.

Christine Woodard, Age 11
Bellevue, Ohio

My dad plays catch with me. I help my dad on picnics outside. I help put wood in the fire. I roasted marshmallows. My dad wrestles with me. My dad walks with me outside.

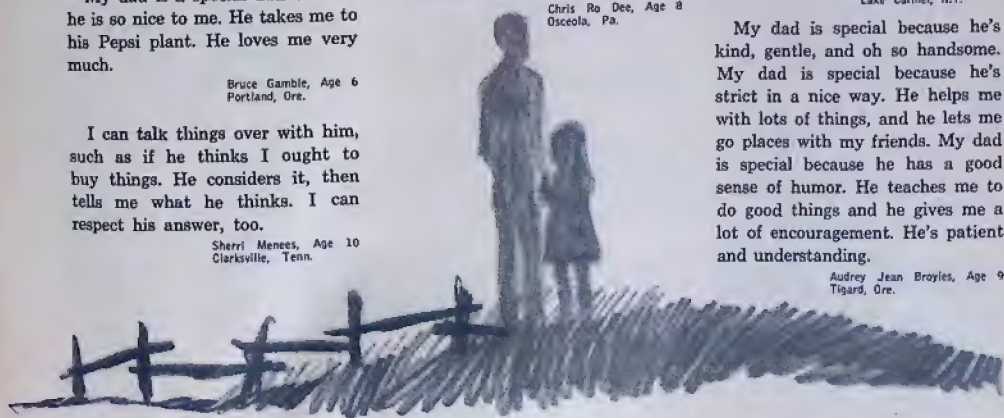
Buzz Vincent, Age 8
Anchorage, Alaska

My dad is a special dad because he is so nice to me. He takes me to his Pepsi plant. He loves me very much.

Bruce Gamble, Age 6
Portland, Ore.

I can talk things over with him, such as if he thinks I ought to buy things. He considers it, then tells me what he thinks. I can respect his answer, too.

Sherri Menees, Age 10
Clarksville, Tenn.



My dad is so special because he helps me do things that I can't do myself, like getting things out of the attic for me when I want them. Whenever I want to play ball or anything he is always there to play with me. When I was sick he got my medicine, then he read books like HIGHLIGHTS and story books to me and he played games with me until I was better. He has helped me make gardens lots of times. I love him very much for all the things he does for me and that is why I think my father is so special.

Michael Amacher, Age 7
Ridgeway, Pa.

He takes us to fun places and tells us what's going on in the world. He lets us have rabbits and an allowance.

Lisa Wardell, Age 11
Salisbury, Conn.

He always tries to understand us. He will help us think through our problems.

Bobbie Oglesby, Age 11
Cowpens, S.C.

Sometimes we go for long walks and just talk. We go down to our friend's farm and Dad and I help with the cows. My dad and I always have lots of fun together, and I love him.

Chris Ro Dee, Age 8
Osceola, Pa.

My father helps me and teaches me things. He also does many other things. He helps me plant gardens. He also takes many hiking and camping trips. He fixes and makes things for me. And my father also does good things for the rest of the family. He helps my mother clean sometimes. He helps my brother fix his things. And when my sister is swinging he pushes her. He helps us all in some way. To me my father is the best father in the whole world!

Melinda Lopez, Age 9
Santa Fe, N.M.

My daddy is special because he gives me surprises. My daddy is special because he plays with me. It's fun when we go for a bike ride and fall in the leaves in the front yard.

It's fun when we play baseball, my daddy and I. Daddy throws the ball to me and I bat it back. I miss it sometimes, too.

My daddy is special because he is so sweet. Sometimes he carries me, too.

Gregory Blomstrand, Age 3
Lafayette, Calif.

My daddy is special because he is the best fisherman in the world and he takes me fishing with him, and because he loves me.

Billy Braidwood, Age 6
Lake Carmel, N.Y.

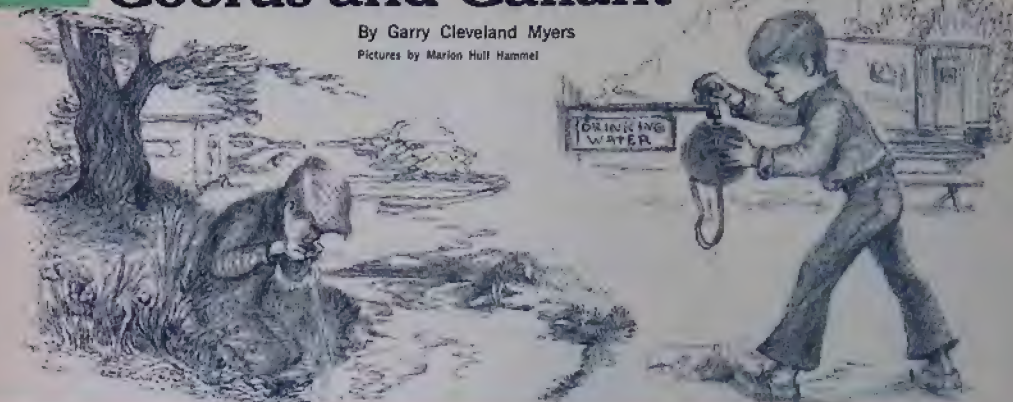
My dad is special because he's kind, gentle, and oh so handsome. My dad is special because he's strict in a nice way. He helps me with lots of things, and he lets me go places with my friends. My dad is special because he has a good sense of humor. He teaches me to do good things and he gives me a lot of encouragement. He's patient and understanding.

Audrey Jean Broyles, Age 9
Tigard, Ore.

Goofus and Gallant

By Garry Cleveland Myers

Pictures by Marion Hull Hammel



Goofus drinks from a creek.

Gallant finds safe drinking water.



Goofus stands in the rowboat.



Gallant keeps low in the canoe.



Goofus throws a small fish in the bushes.



Gallant gently returns a small fish to water.



The Symphony Orchestra — By Linda Lee Stryker

Illustrated by Larry Kettelkamp

Sound has always fascinated mankind. From first hearing the wind as it whistled through bamboo stalks or hearing the grasshopper's leg-scraping songs, man has listened with delight to the sounds around him. Early man made his own music by hitting two bones or pieces of wood together, by stretching skins across hollow turtle shells, by blowing through bamboo pipes, or by twisting skins into strings to pluck.

These ancient sound devices have, over the centuries, been changed and developed into our modern musical instruments. Along the way, men and their instruments began to play in groups in order to perform more complicated music and because they enjoyed it. One group which has many musicians and uses a great number of different instruments is the symphony orchestra.

Did you know that an orchestra is made up of families? There is a string family, a woodwind family, a brass family, and a percussion family. Each family includes instruments that may be large or small but are made and played in about the same way.

For example, in the string family there are violins, violas, violoncellos (most often just called cellos), and bass viols. All are made of wood, have strings, and are played with a horsehair-strung bow. The string family comprises just over half of the hundred instruments in an orchestra, because they play rather softly and more are needed to balance the louder instruments. Violins are the smallest of the strings and they play the highest notes. Violas look just like violins but are a little larger and play a little lower. Cellos have to be held on the floor and basses

are so large that players have to stand or sit on tall stools to play them. They are the lowest pitched stringed instruments and at times sound something like elephants.

The woodwind family includes flutes, piccolos, clarinets, oboes, English horns, and bassoons. They are called woodwinds because originally all were made of wood. All use the player's breath, or wind, to make a sound. Flutes and piccolos are now made of silvery metal and play very high, bird-like notes. They can be taken apart, fit into small cases, and put in a pocket. The piccolo looks like a baby flute. Clarinets use a reed (a piece of flat cane or coarse grass) which the player's breath vibrates. This vibration moves the air through the body of the clarinet. By pressing keys and covering holes, the clarinetist can control the vibrating air to produce

any note he wishes. Oboes, English horns, and bassoons (the largest woodwinds) use two cane reeds which vibrate against each other. These double reeds sound something like humming through a comb or singing through your nose. Because reeds are rather small and break easily, players usually carve and shape their own.

The brass family is the loudest section in the orchestra. In it are trumpets, French horns, trombones, and tubas. They are made of brass and are played by blowing into a metal mouthpiece. Notes are changed when the player tightens his lips or pushes a valve or, for the trombone, slides a slide. The French horn is a pipe about sixteen feet long, all coiled up into an instrument held in the lap. The tuba is almost as large as its player and goes *oom-pah, oom-pah* in marches.

The percussion family includes

many different instruments. A player hits them to make a sound. Sometimes he uses wooden drumsticks (on the snare drum) or a covered mallet (on the big bass drum) or a small metal stick (on the triangle). Other percussion instruments are the xylophone, the glockenspiel (bells), cymbals, gong, wood block, tympani (kettle drums), tambourine, and sometimes a piano. The percussion family is the rhythm section, or heartbeat, of the orchestra.

Harp is among the oldest instruments, some being known as far back as 5,000 years ago. Because they have strings, harps are cousins to the string family; but the harpist plays with his fingers, not with a bow.

On the stage all the instruments sit together in families with the strings in front. The person who sits in the first chair of the violin section

is called the concertmaster. He is responsible for tuning the entire orchestra together. He calls for an "A" pitch from the oboe. Everyone listens to this sound, then tunes his own instrument to match. On music stands are parts written by the composer. The conductor leads all the players to keep them together. He follows the composer's musical score, sometimes by memory. He signals the musicians to play softer or louder, faster or slower, in a smooth way or a jumping way.

The conductor raises his baton. The audience is hushed, the orchestra players alert. The downbeat falls and you are surrounded by music. You sit back enjoying the concert as you listen to the sounds of the four sections of the orchestra: the string, woodwind, brass, and percussion families. Together they create a beautiful symphony of sound.

An Orchestra Seating Plan



First Woman in Space

By Mitchell R. Sharpe

Lift-off! With a deep rumble the huge white rocket rose slowly off the launch pad. Dust swirled in orange and red clouds across the desert at Tyuratam, the spaceport of the Soviet Union. It was June 16, 1963. Valentina Tereshkova, a 26-year-old Russian woman, was on her way to becoming the first woman in space.

Valya, as her friends call her, began preparing for her journey into space in the tiny village of Maslennikovo. March 6, 1937, was bitterly cold; and snow was still on the ground. The crude log hut had neither electricity nor running water. However, its iron stove kept the hut warm enough on that day when Valentina Vladimirovna Tereshkova was born.

Her father was a tractor driver, and her mother a dairy maid. They



both worked on a large farm outside Maslennikovo. However, Valya was to grow up without her father. He was killed during World War II when she was only four years old.

Valya and her girl friend Tonya became the tomboys of the village. Once, on a dare, Valya almost drowned while trying to swim the largest pond near the village. Valya even invented a dangerous game she called "parachuting." She and Tonya would climb to the top of the tallest birch trees and swing out from them. Slowly the trees would bend down until the girls let loose and fell the last few feet to the ground. Sometimes Valya's older sister Lyuda would join them.

When World War II ended, the Tereshkova family moved to Yaroslavl. There Mother took a job in a textile factory to provide for her children. Valya began growing up and still remained a tomboy. When the neighborhood boys dared her to

jump from a bridge into the river, she did. Then, she climbed back up on it and jumped again—before the first boy ever jumped once!

When she was sixteen years old, Valya tried to find a job. It took a year. She finally went to work in a plant making tires for automobiles and tractors. The work was hard and the factory was hot and noisy. The odor of hot rubber was everywhere. After a year there, she managed to get a job in the textile plant where her mother and sister worked. Valya was put in the ribbon-winding department.

In 1958, Valya joined the Yaroslavl Air Sports Club and learned to be a real parachutist. She learned to jump at night, over land, and into the river. The most dangerous of her 63 jumps was from a plane at a very high altitude. She had to fall freely, not pulling the ripcord until the last minute.

On April 12, 1961, following the

flight of Yuri Gagarin, the first man in space, Valya wrote a letter to her government. As a parachutist first class, she volunteered to become a cosmonaut. (In the Soviet Union, astronauts are called cosmonauts.) To her surprise, she was accepted for testing as a cosmonaut. For a month, Valya took special physical and mental tests at an air force hospital in Moscow. Other girls were there, too; but Valya was the first to complete the tests and become a cosmonaut.

She was sent to Star Town, a suburb of Moscow. All the cosmonauts live and train there. When she arrived, Valya was met at the door of the dormitory by a handsome but shy young man.

"Hello, Valya," he said. "My name is Andrian Nikolayev. I will take your suitcases up to the second floor. That's where you girl cosmonauts are going to live."

Cosmonaut training began the next day. Valya had to study harder than the other girls because she had not been to college as they had. There were courses in astronomy, physics, biology, and mathematics. In addition, there was a strict course in physical training. Valya had to compete in both indoor and outdoor sports. She became skilled in skiing,

basketball, volleyball, hockey, and swimming.

If all this were not enough, she learned to fly as well. Despite being a parachutist first class, she had to start parachute training all over from the beginning. When she was not flying, jumping, or studying, she was riding the centrifuge. The cosmonauts called it the devil's merry-go-round. Whirling around on it, Valya learned what the great force on her body would feel like when her rocket lifted off.

On May 26, 1963, Yuri Gagarin, commander of the cosmonauts, called Valya into his office.

"Valya, tomorrow you and your back-up cosmonaut are to leave for Tyuratam. Valery Bykovsky and his back-up will be going with you," he said. "As you know, the launch dates for Vostok 5 and 6 are not far off."

Valya knew then that she was going to be the cosmonaut for Vostok 6.

June 14 was bright and sunny, and Valery's Vostok 5 lifted off without a flaw.

At 12:30 a.m. on June 16, Valya lifted off to join him in space. For three days, she circled Earth. In addition to piloting the Vostok 6, she took pictures for astronomers. Also, she did special exercises and

tests so that doctors could tell whether women could live and work in space as they knew men could. Vostok 6 returned to Earth on June 19.

When Valya got back to Star Town, she had some news that surprised everyone. She and Andrian Nikolayev were going to be married. After the marriage, she and Andrian went on a honeymoon to India, Nepal, Ceylon, Thailand, and Indonesia.

Then Valya returned to Star Town and her cosmonaut training. She also entered Zhukovsky Engineering Academy to work on her degree in astronautical engineering. However, on June 8, 1964, her classes were interrupted when her daughter, Yelena Andrianova Nikolayeva, was born. Yelena is the only person in the world whose mother and father have traveled in space.

Today, Valentina Nikolayeva-Tereshkova is still busy. As official hostess of Star Town, she has greeted such distinguished visitors as astronauts Frank Borman and Neil Armstrong. She graduated from the Zhukovsky Engineering Academy, and is now one of the teachers at the Yuri A. Gagarin Cosmonaut Training Center at Star Town.



Illustrated by Tom Dunnington

★ The biography of a Russian woman who made history.



Valentina and Andrian Nikolayev with their daughter Yelena.



June 16, 1963: Space-flight history is made by first woman in space.

Photographs courtesy of Novosti Press Agency.



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By Jack Myers

I have wondered about this. For thousands of years the grizzly bear was king among the animals of western North America. Like man he ate all kinds of foods: berries and nuts, squirrels and deer. That made him a competitor with man. But then there was lots of room for both grizzly bears and the only men around—the Indians.

The grizzly gets its name from the gray ends of its hairs. It is bigger than the more common black bear and has been called the most ferocious animal in America. It is as different as you can get from the teddy bear that you may have taken to bed with you when you were very young. There is nothing cozy or cuddly about a grizzly bear.

Science Reporting

Can We Learn to Live With Grizzly Bears?

Today there is not much room left for the grizzly—only a few wild areas of the Rocky Mountains. One of these is Yellowstone Park, a part of the wilderness kept as wild as a park can be when it is visited by more than two million people each year. One of the purposes of Yellowstone is to preserve the grizzly bear as one of its original wild animals. To do this, naturalists have studied the grizzly to find how it lives and what it does.

There are about 200 grizzly bears in Yellowstone Park. That's about one for every 20 square miles. Many of these have been trapped or treated with tranquilizing drugs so that they could be marked and recognized when seen again. Some were even fitted with little radios to find out where they went and what they did. None of these things did the bears any harm but allowed them to be studied one-by-one.

How could the park naturalists trap so many bears scattered over such a big area back in the wilds?

That is an interesting part of the story and here is where humans come in. If two million people visit Yellowstone Park each year there must be a lot of garbage. For example, in one year there were about 7,000 tons of garbage that had to be put somewhere, mostly in dumps. Garbage dumps have been used for about 80 years and the grizzlies learned long ago that these were good places to dig out an easy meal. During the summer many of the bears travel as much as 75 miles in a kind of migration to the dumps. A few years ago, more than a hundred grizzlies could be found near the large dump at Trout Creek, which is close to the center of the park.

Garbage dumps became a part of the ecology of Yellowstone Park. And they changed the behavior of the bears. Out in the wild areas a grizzly is not sociable to other grizzlies, prefers to avoid humans, and is dangerous only when surprised. In records kept over forty years only three people are known to have been injured while hiking in the wild areas of the park. And all these injuries came from female grizzlies who seemed to be protecting their cubs.

Garbage dumps, even with their human scent, are too much of a temptation for an easy meal. They bring the grizzlies in close to campgrounds and lots of people. The trouble comes when grizzlies get used to people. It is only a short jump from garbage dumps to the garbage cans of campgrounds. And some people are pretty messy about leaving food around, in spite of what the signs say. I think the Rangers, even though polite, must consider some humans as the dumbest animals in their park. Anyway grizzlies and people do not mix very well. Having grizzly bears

Photographs courtesy of National Park Service
U.S. Department of the Interior

around campgrounds means that some people are going to get hurt.

In the ten years of the 1960's the records show that 39 persons were injured by grizzly bears in Yellowstone. The exact number may be smaller because some injuries are caused also by the many black bears which we are not talking about here. Most of the injuries were minor and needed only first aid treatment. Eleven required hospital treatment. The last person killed was a man who tried to chase a grizzly away from a wagonload of supplies. That was way back in 1916. And it is said that a visitor was killed by a mother grizzly back in 1907 after he had chased her cub up a tree and poked it with an umbrella.

The chances of getting hurt by a grizzly in Yellowstone are not very high—maybe one or two chances in a million. And I am sure that more people in Yellowstone are hurt by other people and by automobiles than by grizzlies. Even so the grizzlies are recognized as a hazard, and if you were one of those hurt you would not feel very kindly toward them. During the same period in which 39 people were injured, 37 grizzlies had to be shot because they hurt or scared people. That is pretty hard on grizzlies. It seems that the only way to save grizzlies is to keep them away from people. Can we do that? From what we have learned it may be possible.

Naturalists of the park have tried several different control measures.



One idea is to catch bears that come into campgrounds and carry them back into the wild country. Sometimes this works but often it does not. One bear was caught in campgrounds six times. Even though it had been carried as far as 30 miles back into the wilds, it kept coming back. It seems that the easy-to-get food around campgrounds is as habit-forming for bears as some drugs are for humans. So the problem is how to keep bears from getting this bad habit.

During the past few years many dumps have been closed down and replaced by incinerators to burn up garbage. That has driven more bears into campgrounds even though most garbage cans have been made "bear-proof." More bears have had to be shot or given to zoos. There is some argument among scientists whether

the garbage dumps should be closed all at once or should be closed down gradually. But they agree about what has to be done in the end. We need to fix all human food and garbage so that bears cannot get the easy handouts that bring them close to people.

Maybe we can change the habits of the bears and the careless habits of people. If we can do that, then maybe both people and grizzly bears can live together in Yellowstone Park.

What I have told you is based upon two articles in Volume 21 of *Bioscience*: "Grizzly Bear-Man Relationships in Yellowstone National Park" by John J. Craighead and Frank C. Craighead, Jr. "Preservation and Management of Grizzly Bears in Yellowstone National Park" by Glen F. Cole.

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Rutabaga Summer



"Goodness, no!" said Danny's mother. "At least I hope not!"

"Well, I'm going to pretend they are," said Danny, taking one. "Rutabaga cookies." And he giggled. "Rutabaga, rutabaga."

And that was the pattern of the way things would be during Rutabaga Summer.

When they played games, someone was always Mr. Rutabaga. When they played cars, they got gas at the Rutabaga Garage. When they got mad at things, they yelled, "Oh, rutabaga!" Ron's yellow slot-car racer was rutabaga-colored. The boxcars on Danny's electric train delivered rutabagas. They organized a pretend insurance company called Morgan, Franklin, and Rutabaga.

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By William Ashworth

"Rutabaga?" asked Danny Morgan.

His friend Ron Franklin smiled. "Rutabaga," he said. "It's a vegetable of some kind."

"What do rutabagas look like?" "Something like a turnip. I heard my mom and dad talking about them last night."

"What do they taste like?" "Don't know," said Ron. He shrugged his shoulders. "All I know is, it's an awfully funny name. Rutabaga."

"Rutabaga," said Danny. And they both burst out laughing, rolling over and over in the green June grass. They were five days out of third grade. Fourth grade was a long time off, and the sky was blue, and the air was cool and fresh, and there were rutabagas in the world.

Danny leaped to his feet. "Race you to my house!" he called out. "Last one there is a rutabaga!" It was the beginning of what would later be called the Rutabaga Summer.

Breathless and laughing, Danny and Ron tumbled into the kitchen

where Danny's mother was making cookies. "Mom," asked Danny, "have I ever tasted a rutabaga?"

"No," said his mother. "I don't think so, anyway." She pointed to a pan of cookies cooling on the counter beside the stove. "Have a cookie," she said.

"Are they rutabaga cookies?" asked Ron.



They started a neighborhood newspaper, *The Herald-Rutabaga*.

They told rutabaga riddles: What's round and yellow and goes buzz, buzz, buzz? An electric rutabaga.

In June, they ran a lemonade stand that advertised RUTABAGA JUICE.

In July, they asked the man who came around on the ice-cream truck if he had any rutabaga ice cream.

In August, Danny called his sister "Rutabaga-face," and she cried, and his mother scolded him and went out to talk to Ron's mother over the back fence.

"Are you, by any chance," she asked, "getting tired of rutabagas?"

"I am indeed," said Ron's mother. "Do you have any ideas about how to stop the rutabagas?"

"I am working on one," said Ron's mother. "As of yet, it's only an idea."

"I wish you luck," said Danny's mother, and she went back into the house.

The next day, Danny came to his mother and asked if he could sleep out in Ron's backyard that night. "He invited me," he said. "And his mother said it was all right."

"If his mother said it was all right, then it's all right," said Danny's mother. So Danny took his sleeping bag and his cowboy hat and his checkers and went over to Ron's. They had a great time all afternoon. First they played Monopoly. ("Go directly to jail, do not pass rutabaga.") Then they played Mad Scientist. ("I warn you I am inventing a way to turn you into a rutabaga!") Then they went outside and played cowboys and rutabagas. Then they played...

"Suppertime," said Ron's mother. The main dish for supper was stew. Ron and Danny each heaped great portions on their plates.



Illustrated by Anthony Rao

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"Hey," said Ron, "what tastes weird?"

"What looks weird?" asked Danny. He held up something on the end of his fork. It was a funny yellow color, and looked a little bit like a potato, but it didn't taste at all like a potato.

"Do you know what that is?" asked Ron's mother.

Danny and Ron looked at it. They looked at each other. They looked at Ron's mother. "It's a rutabaga!" exploded Ron.

"That's exactly right," said his mother. "How does it taste?"

"Eeeuuuchchchch!!!" said Danny and Ron together.

Later that evening, just before it was time for the boys to go to bed, Ron's father wandered out to the kitchen where his wife was getting a snack of fruit for all of them. "Madge, you're a genius," he said. "I haven't heard a 'rutabaga' all evening."

"I know," smiled Ron's mother.

"Isn't it wonderful?" She topped each bowl with a round yellow fruit. "Ron! Danny!" she called. "Time for your snack and bed."

Ron and Danny rushed into the kitchen. They looked at the bowls of fruit.

"Hey, what's that funny-looking yellow one on top?" asked Ron.

"That's a kumquat," said his mother.

"Kumquat," said Ron. He looked at Danny.

Danny looked back. He giggled. "Kumquat," he said.

"Kumquat!" they yelled together. The smiles on the faces of Ron's parents faded.

"Let's go put on our pajamas," said Danny. He took off at top speed, calling back over his shoulder, "Last one to the bathroom is a kumquat!"

And so the Rutabaga Summer ended.

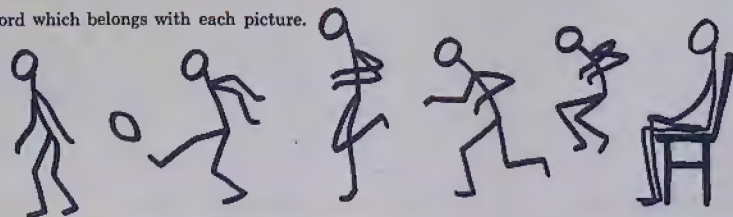
And the Kumquat Autumn began!

Fun With Words

Action Words

Find the word which belongs with each picture.

run
jump
walk
kick
hop
sit



Double Letters

When the same letter appears twice together in a word, we call it a double letter. Can you name a double-letter word for each of the following?

1. An insect with a double e.
2. An animal with a double r.
3. A vegetable with a double l.
4. A fruit with a double p.
5. An insect with two double letters (s and p).
6. A bird with three double letters (p, o, and l).

Answers:

1. bee 2. squirrel 3. lettuce 4. apple
5. grasshopper 6. whippoorwill

Turn-About

In each of the underlined words below, two of the letters have changed places. Can you tell what the underlined words should be?

I can't go now; I'm too suby.

Can you lend me a kicnel?

I made it out of rapep.

Let's have a tarpy.

I can do it tebter.

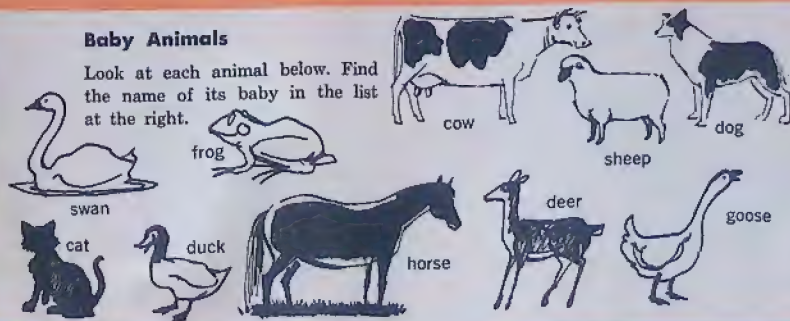
That way is too swol.

Check the date on your calander.

That's tighr!

Baby Animals

Look at each animal below. Find the name of its baby in the list at the right.



fawn
calf
gosling
duckling
puppy
kitten
colt
cygnet
tadpole
lamb

Why

Why do more people live in California than in Rhode Island?

Why are there more cattle in Texas than in Maine?

Why is more corn grown in Indiana than in Nevada?

Why are there many orange groves in Florida and not in Montana?

Why might the air be more polluted in New Jersey than in Arizona?

Why is cotton grown in Georgia and not in Minnesota?

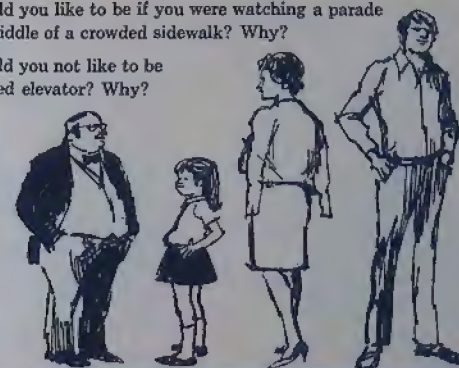
Why is steel more expensive in Hawaii than in Pennsylvania?

Why are there more coal miners in West Virginia than in Utah?

Why are there more automobile tires sold in New York State than in Vermont?

Which would you like to be if you were watching a parade from the middle of a crowded sidewalk? Why?

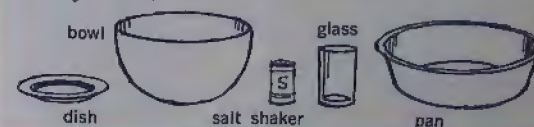
Which would you not like to be in a crowded elevator? Why?



Using Your Mind

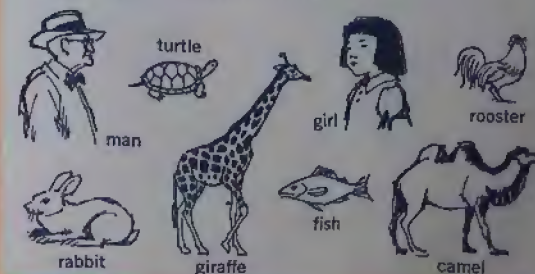
45

Suppose all these were empty and you wished to put them all together into one package? How would you do it?



Which more often lie on the stomach than on the back?

Which of these may sometimes lie on the back while resting or sleeping? Which do not?



The Story of Bread

By Elaine Mosel Metallo

Illustrated by Lois Axeman



What is it that you eat on the average of three times a day, every day of your life?

The answer is bread. Can you imagine eating all of your meals without any bread? Think of it—no breakfast toast, no sandwich for lunch, no biscuits for dinner. A hamburger or hot dog would not be half as delicious without a roll to put it in.

Bread has a long history. Some form of it has been an important part of man's diet for over 6,000 years.

No one knows just who made the first loaf of bread, but we can give the Stone Age people credit for it. They discovered that the seeds of wild grasses could be eaten. Before long they learned to replant some of the seeds and raise a crop of the grasses so they could have a continuous supply of seeds.

Then someone figured out a way

to crack the seeds and grind them up between two stones. The very coarse flour they obtained was mixed with water, shaped into little cakes, and baked on flat stones in the sun. A lot of work—it took almost all day to make enough flour for one day's bread—but at least they had a constant supply of food when game was scarce.

The process of leavening, or rising, bread dough with yeast was not discovered until many centuries later.

It is said that a slave in ancient Egypt discovered the secret of leavened bread. Accidentally, he left a portion of dough outside in the air and warm sun. Several days later he discovered the puffed-up piece of fermented dough, but his master was watching so he couldn't throw it away and appear wasteful. He added it to a newly mixed batch of dough.

The older fermented piece contained natural yeast organisms from the air, and they caused the new batch to rise up also. When the bread was baked, it was much lighter and tastier than any they had eaten before.

Yeast is a living organism. When it is combined with flour and water, it feeds on the natural sugar in

the flour and begins to grow. As it grows, bubbles of carbon dioxide gas are formed through a chemical reaction. These bubbles leaven the dough, causing it to rise up and become light. Yeast is called a leavening agent.

Baking the dough stops the rising process because it kills the yeast. The gas escapes during baking, but the tiny holes in the dough made by the gas bubbles remain, thus making a light-textured bread.

Of course, news of the slave's discovery spread quickly to other countries as people traveled. The Phoenicians learned about leavened bread when their ships visited Egyptian shores. They in turn passed the news to the Greeks. The Greeks carried the news to the Romans, who then introduced leavened bread to the rest of Europe.

By the year 100 B.C., there were already 258 bakeries in Rome. In that year, the emperor formed the first Bakers Guild, or union. Before long, bakeries were being built all through Europe. The bakers and the millers who ground the grain were among the richest men in any town.

Through the centuries bread continued to be the main item in every-



one's diet. Whenever grain was scarce because of drought, everyone suffered. Throughout history, a lack of bread has caused famine, riots, and even wars.

At one time, the kind of bread a person ate was determined by how rich he was. Only the richest ate white bread. It was white because all the bran, or outer husks of the seed kernels, had been removed from the flour. This was a long process, and only the rich could afford to buy bread made from this flour. The poor ate only dark, whole-bran bread.

The people of different countries have developed their own favorite kinds of breads. Perhaps you have eaten the long, crusty, white French loaves. People from some Eastern countries like Iran and Syria bake their bread in round, flat loaves which they split and fill with meat and vegetables.

Chinese bread is usually steamed instead of baked. Of course you are familiar with the high, light loaves we Americans are fond of.

In making bread at home, most doughs are mixed by hand, or kneaded, for several minutes. Some, however, can be mixed well with a spoon and are easier for someone

just learning to bake bread. If you would like to try your hand at bread baking, use this recipe for:

Quick and Easy Dinner Rolls

- $\frac{3}{4}$ cup warm water (not hot)
- 1 package active dry yeast
- 1 tablespoon sugar
- 3 tablespoons soft margarine
- 1 teaspoon salt
- 2 cups unsifted flour

Pour the water into a large bowl. Sprinkle the yeast on top of the water and stir with a spoon to dissolve the yeast. Add the sugar, salt, and margarine to the yeast. Add 1 cup of the flour and stir it in with

a large spoon. Then stir as fast and hard as you can until the dough looks smooth. Now stir in the rest of the flour. The dough will be very thick and sticky. Leave the dough in the bowl and cover the top with a towel.

Make a warm place for your dough to rise by placing a bowl of hot water on the bottom shelf of your unheated oven and putting the bowl of dough on the top shelf.

Let the dough rise for about 45 minutes, until it doubles in size. Then stir the dough down with a large spoon.

With margarine, lightly grease two round cake pans. Dip your hands in flour (to keep the dough from sticking to you) and pinch off small pieces about the size of golf balls. Form into balls and place them in the pans, about 8 pieces to a pan.

Cover the rolls with a cloth and let rise another 30 minutes in the oven as before.

Take the rolls and the bowl of water out of the oven. Heat the oven to 400° F. Remove the cloth from the rolls and bake them for about 12 to 15 minutes, or until they are brown.

Good eating!



Some Things To Make

A Hanging Flower Basket

By Irene K. Koffarnus

Start with a round salt box or a small-size round oatmeal or corn-meal box. Cut an oblong-shaped opening about 4 inches wide, leaving an edge of at least 1 inch at the ends. Cut holes for the handle as shown.

Pull a cord or heavy string about 30 inches long through the holes, so that the cord makes two handles. Fasten the two handles together at the top with a bow of the same cord.

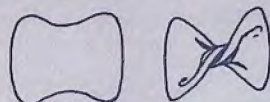
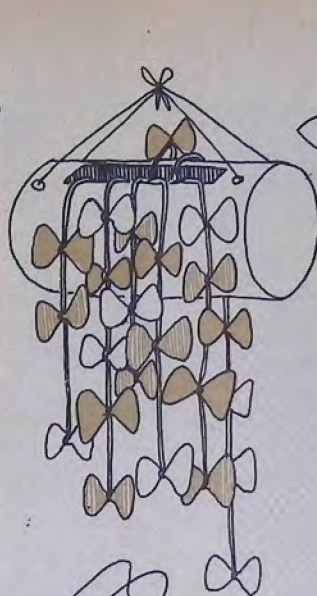
Mix together 2/3 cup flour and 1/3 cup salt. Stir in a small amount of powdered tempera paint, adding more for the desired color. Then add water, a small amount at a time, until the mixture is of mudpie thickness.

The mixture can also be colored with ink, cake coloring, bluing, or liquid coloring. Even household paints or enamels will work. But when using a liquid coloring, remember to add it after the flour and salt have been mixed with the water.

Pat the mixture all over the outside of the box. Be sure to cover the entire surface. If desired, designs of whorls or lines can be made in it, just as in fingerpainting.

Hang up the basket to dry. It will take two or three days. While it is drying, make the blossoms to go in it.

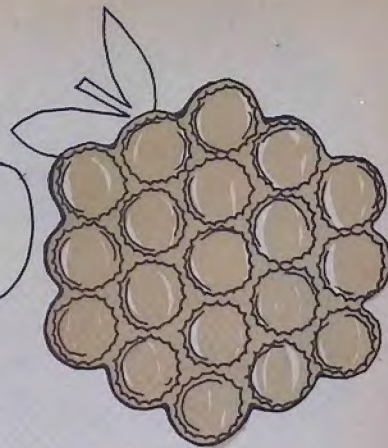
Several yards of green nylon or wool yarn will be needed. Cut the yarn in pieces ranging in length from 6 to 15 inches. Twenty-five or thirty pieces will fill a salt-box basket nicely; a larger box needs more.



For the blossoms, use napkins, tissues, crepe paper, or tissue paper in different colors. Cut many pieces of different colors, using the pattern shown. Be sure the grain of the paper runs crosswise. If tissue paper is used, double it for thickness.

Twist each blossom at the center, making a full turn for a firm center. Tie the blossoms on the strings about 2 inches apart. Leave about 3 inches at the top of each string for fastening inside the basket.

When the basket is dry, arrange the strings of blossoms along the long sides of the opening. Fasten them on the inside with tape.



Hot Dish Holder

By James W. Perrin, Jr.

Glue pop-bottle caps on a heavy piece of cardboard in an apple or grape shape. Draw a leaf and a stem on the cardboard. Cut out around the caps and leaves. Spray with flat paint.

Bottle-top Flowers

By James W. Perrin, Jr.

Cover bottle tops and caps with one layer of pasted paper. Paint them when dry. Glue them to a heavy piece of paper. Glue on yarn for stems and leaves.



Sunflower Picture or Card

By Katherine Corliss Bartow

For each flower, cut two shapes (as shown in illustration) from yellow paper. Glue the two centers together, placing the top flower so the petals fall between those on the bottom flower. Cover the top flower center with white glue. Sprinkle dried coffee grounds over the glue.

Cut the leaves on a fold of green paper.

The sun is a circle of orange or gold foil paper. Draw features with a ball point pen, and sun rays with gold ink or orange pencil.

For a picture, glue a row of sunflowers by their centers to a sheet of white drawing paper. Mount it on a larger sheet of green construction paper. Draw green stems. Glue on leaves at the creased centers only. Bend the flower petals and leaf edges forward.

For a greeting card, use flowers and sun, as shown, on a folded sheet of drawing paper. At the bottom print "Sending sunshine and flowers." Inside print your message.

Fourth-of-July Hat

By June Rose Mobly

Choose a paper bag that is the right size to fit your head. Cut the bag down until it is about 5 inches deep. Turn upside down and glue on an eagle's head and feet cut from yellow construction paper. Add details with a black felt-point marker. Cut stars from red, white, and blue construction paper. Glue in place on the sides and top of the hat. If you put 50 stars on your hat, you could write the name of a state on each one.

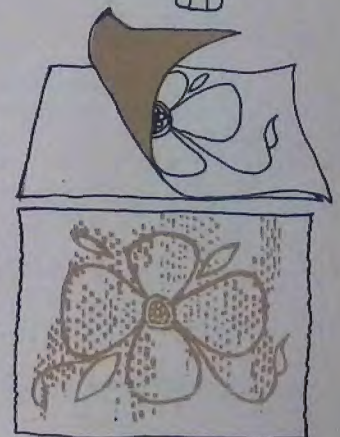


Draw a Print

By Lee Lindeman

Sketch a picture on a piece of paper the size of a paper towel. Paint the entire back of the paper with poster paint.

While the paint is still moist, place the paper, wet side down, on a paper towel. Use a crayon to draw over the lines of the picture you sketched. Lift up the paper and observe the interesting print you have created.



Punched-dot Fun

By Betty Nordwall

Punched dots can be used to decorate stationery, cards, and envelopes, or can be used for just plain fun. Dime stores have inexpensive hole punches if you don't have one at home. Punch dots from any paper available—construction paper, old magazines, Sunday funnies, advertising materials, and so on. Glue them onto paper and see how many different things you can make by adding a few lines with a pen or pencil. To start off, here's a bunny, spider, rooster, and pansy.





Headwork

Do we eat cookies with a spoon?
What noise does a dog make?
Which is larger, an orange or a grapefruit?
What day of the week do you like best?
Do animal children have birthday parties?
Which are farther apart, your eyes or your ears?
How many wheels does a wheelbarrow have? A bicycle? An automobile?

Why don't we carry eggs in a bag as we would carry apples, oranges, or potatoes?

How does the mailman know which letters are for you?

Which makes more noise while walking, a horse or a dog? Why?

Look at the little pictures on page 18. Now close the book and without looking at the pictures again, name as many of them as you can. Then turn back and see how many you remembered.

Why do we take medicine from a spoon instead of drinking it from the medicine bottle?

When Allen came home from a playmate's house, he said, "They are going to have sauerkraut for dinner." No one had told him and he had not seen the sauerkraut cooking. Then how did he know?

Does wood burn better when it is wet or when it is dry?

Which could you fill more quickly with water, a gallon pail or a gallon jug? Why?

Is the outside of your home made of brick, wood, or stone?

Why do we try to write a telegram in as few words as possible?

"Who has been digging in the garden for worms?" asked Mr. Young. How could he know someone had been digging for worms and not spading or cultivating the garden?

Before Elwin left home for summer camp his mother did something to his clothes so he would not lose them. What did she do?

When you have a fire drill at school, you do not know, as a rule, whether it is to escape a real fire or if it is just a drill. Why doesn't the teacher tell you?

After a heavy summer rain there may be a number of puddles of water in the street. What may cause them to disappear?

"That big elm is dead," said Robert as he pointed to it one day in July. How could he know it was dead?

Parents! Important Notice

Would you like to tell others about HIGHLIGHTS? You can earn a substantial (full- or part-time) income for your service while meeting new friends and enjoying limited travel within your local area. HIGHLIGHTS needs Community Representatives in some areas to visit parents and describe HIGHLIGHTS' benefits. Age is no barrier—maturity and experience with children are assets. Sales materials supplied at no charge and training assistance provided. If you have a car available, and full-time or substantial part-time hours available, write: Roland S. DeMott, Vice President, Representative Sales, Highlights for Children, Dept. A, 2300 W. Fifth Avenue, Columbus, Ohio 43216.



Thumb Fun

By Joan Andre Moore

Twiddle your fingers and stamp with your thumbs. Imagine things with all your might. Giggle a little or a lot inside, and you're ready for fingerprint pictures.

No one in the wide world can do this art just the way you can, though, and why is that?

Because no one in the wide world has fingerprints exactly like yours. Your fingerprints always say: "Me. Me. Me."

Before you start, cover your work space with newspapers to work on. Keep some paper towels handy, and some soap and water to clean your hands later.

The first step is to press your thumb down on an inked stamp pad. (One that is soaked with ink that will wash off your fingers.) Next press your inked thumb on a piece of paper.

Now what can you do with a thumb print?

Well, practice printing on some paper scraps until you get some good prints. Then take a pen or pencil and add a little of this and a little of that and discover:

A mouse; a ladybird beetle whose house is on fire; a fuzzy, buzzy bumblebee...



Good-bye!



until next month

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